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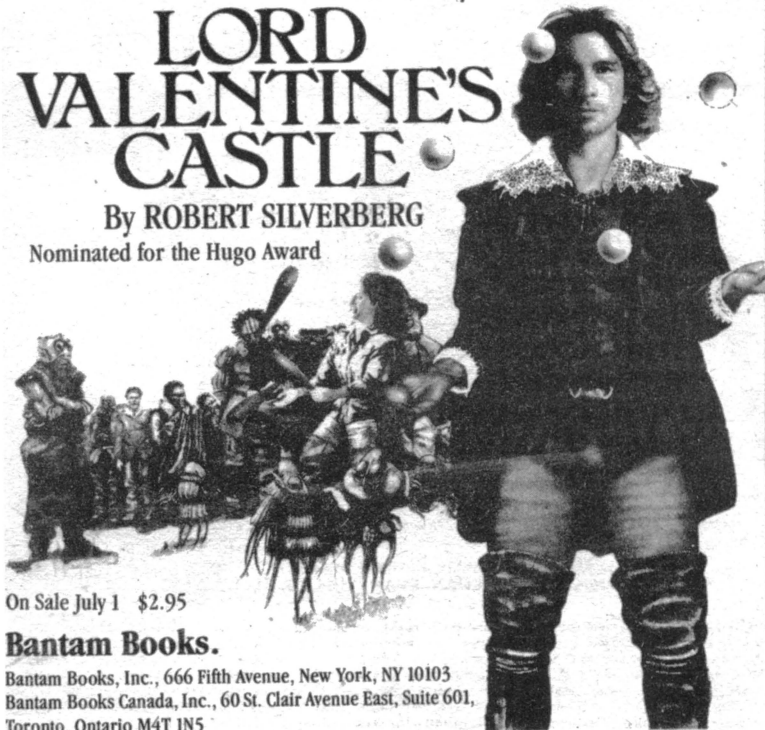
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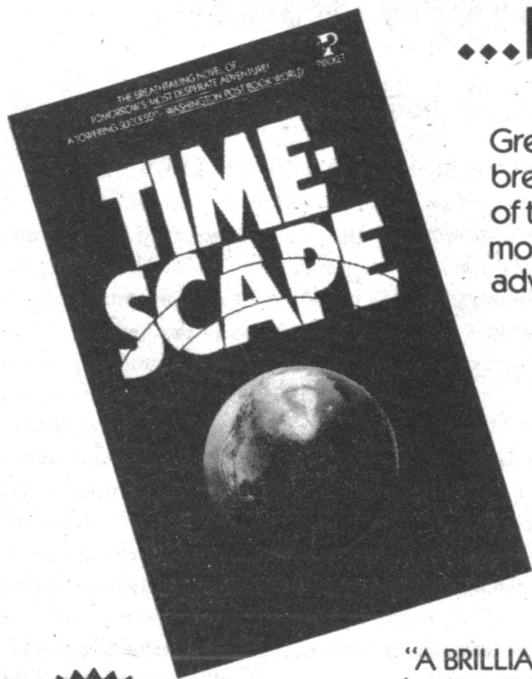
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Here is Michael Shea's first story since "The Autopsy" (December 1980), which at this writing has been nominated for both Hugo and Nebula awards. The author calls this one "straightforward science fiction," which is not to say that the exciting events that take place on the planet known as Firebairn do not benefit from Mr. Shea's distinctive approach along with a huge surprise.

Polyphemus

BY

MICHAEL SHEA

The sunlight falls bright and strong on the wastes of Firebairn at noon, but the wind is fresh and cuts through the warmth of it. Consequently, murmions usually sun themselves in the lee of the buttes and the eroded volcanic cones that stud those plains. In the lee of one such cone — more like a ragged ring-wall really, no higher on the average than a hundred meters, but more than four kilometers in the diameter of its enclosure — a murmion luxuriated on a patch of red sand.

The creatures are rather like baby seals in shape, though a bit smaller, which still makes them among the largest of Firebairn's sparse terrestrial fauna. The lakes, such as the one in the crater behind this murmion, and the sea contain the overwhelming majority of the planet's animal life and all its most impressive forms. Indeed, the colonists there had recently established

that the murmion evolved from an aquatic line, the same order to which the economically important and much larger delphs belonged. Members of this order were sometimes called "mammalian analogues," based on their reproductive systems, lungs and vascular organization, but there was something of the arthropod in all of them, perhaps most noticeably in this little pioneer of the dry land. It had a smooth, chitinous hide and primitive eyes — ommatidia, really — like small, black knobs, while its "flippers," fore and aft, were rigid and three-jointed, though of an oar-like flatness that proclaimed their ancestral function.

This murmion had chosen an unfortunate spot for its nap. It was dark blue in color, and the sand's red put it in sharp relief. This had not gone unnoticed by a second organism which now crouched up on the crater's rim,

still dripping from the lake within, whence it had just emerged. This, known colloquially by the colonists as a "gabble" (*sturtis atrox thomsonia*) was batrachian in form, though morphologically a far simpler organism than any frog, being in fact more analogous to an immense rotifer or roundworm in its internal structure. It moved on four pseudopodia, a green, viscid mass with a vast slot for a mouth and, above the mouth, a freckling of rudimentary eyes reminiscent of a spider's. It found prey by a subtle discrimination of color contrasts, and since it frequently left the water to forage along the land fringes, one could not help feeling the murmion's sunbathing habits were singularly maladaptive. The gabble was easily four times the size of the murmion, and swift and silent as liquid — properties it now demonstrated as it leapt and flowed down the side of the crater towards the sleeper. Its final lunge came from so high that the force with which it smacked down on the murmion imparted a paralyzing shock to the prey. The gabble stepped daintily back from the stunned creature, bobbed and weaved, seemed to shudder with delicate anticipation, and swallowed the murmion whole.

It crouched there, steeling down for its digestive stasis on the warm red sand. Had it possessed more highly evolved eyes, it might have been alarmed, for something of immense size was already quite near, grinding its

slow way across the desert towards the crater. Perhaps not. The gabble had no natural land-dwelling predators larger than itself.

The wastelands of Firebairn would have moved any viewer susceptible to nature's grandeur. The genesis of this, and of the planet's other, quite similar continent, were now well understood. They were immense tables of volcanic outflow, produced by several primary magma vents in the sea floor and both ruptured and augmented by a multitude of lesser vents. The period of active vulcanism was a hundred million years past. For the latter half of this period an oceanic weather cycle had been established which seasonally scoured the land with hurricane winds and hammering rains, burnishing the glassy buttes and cones, scouring the obsidian fangs and claws off them, till now they shone like glazed ceramics in the sun. Only the stumps of the once-vertiginous volcanoes remained, twisted pots and cauldron rims, loaf-shaped nubs of mountains — all red, black, green and ocher. Between these ruined works of the planet furnace were the glorious level wastes of wind-rounded gravel and sand in patches, stripes and tangled ribbons of the same colors, or in eerie melds of all four where the weather patterns had mingled them. And bejeweling this already jeweled terrain, the numberless lakes — most of them in the craters, but many on the flats where their stark, cruel blue

shone impossibly intense within their shores of polychrome detritus. It was a world of inexorable beauty, through which a man might go in rapture, but only if borne in steel, only in a juggernaut harder than the harshness of that stern paradise.

The sand-hog was such a craft, a great tractor-transport, tank-treaded, that chewed across the gravel, gnawing it with a continuous, fifty-ton bite. It bore three boats in its undercarriage, nine men and women in its upper decks. In its middle was a holding tank, a belly that whole schools of delphs could be swallowed into and carried off to sate the hunger of the growing colony. It was now farther from the colony than it had ever gone, not due to any shortage of delphs in the colony's immediate vicinity, but in order to combine forage with exploration and mapping of the continent. As the vehicle drew near the landmark its captain had selected for inspection, Penny Lopez, watching from one of the ports, said:

"Look. There's a gabble."

Several of the others joined her at adjacent ports. Aside from indicating that the crater indeed contained a lake, the presence of a gabble was a good sign that the lake would contain delphs, for the creatures were typically ecological associates. Both inhabited "ocean rooted" lakes, those whose containing craters possessed open vent systems that connected their waters with subcontinental marine influxes.

"Why is it wobbling like that?" asked Japhet Sparks, the cartographer. Nemo Jones, one of the armorers, smiled within his ragged beard.

"Maybe he ate something nasty." Penny looked at him sharply. Nemo's ability to irritate her, by even the most innocent-seeming remarks, was a source of open humor among the colonists. But Orson Waverly, who was the expedition's biologist, glanced at Nemo and shared his smile.

Indeed, the gabble did not look well. Pseudopodia spread, it seemed to be trying to brace itself, while spasms and tremors made it quake like a shaken plate of jelly. One of its sides bulged. From the bulge, something sprouted that looked like a blue, crooked knife blade, and even as it did so, a second, identical one erupted from the creature's opposite side. With a synchronized, sweeping motion, like oars plied by a boatman, these blades began to cut two jagged incisions through the flanks of the gabble.

"Captain Helion," said Waverly, "would you go at one-third for a moment for a field observation?"

The formality of the request was necessary, for the captain, a tall and statuesquely handsome man, disliked modification of any of his procedures. He arched an eyebrow, nodded coolly, and cut speed.

The observation required little time, for as the gabble ceased its impotent quiverings of resistance, a second pair of angled blades thrust from its

sides. With an undulating, swimming motion (not unlike a baby seal's) these four trenchant protrusions completed a circuit of the froglike belly. Head and forelegs flabbily collapsed, and from the bloody-edged barrel of the gabble's hindquarters, the bright, eye-knobbed snout of a murmion poked into the sunlight. It was a brief, exulting gesture, as a dolphin might make, breaking the surface out of sheer exuberance to dive again — and this the murmion did, greedily, into the nourishing pot of its prey's stomach.

Penny scowled at Nemo Jones, who smiled again, more broadly this time. She marched to the piloting module, where Helion was already gearing up again, and guiding the sand-hog into a course around the crater's base, to begin the search for an access to its interior negotiable by the fishing boats' tractor treads.

"What are the chances of finding a break?"

Captain Helion's normal manner of stalwart composure was always faintly heightened in Penny Lopez's neighborhood. He cocked an eye at the crater wall and murmured a judicious reply. Nemo Jones turned to Waverly, who was making a journal entry, and said:

"You won't see that happen on dark sand. Murm's always lie up on red or yellow, to show up better for the gabbles."

"Don't tell me," put in Jax Giggans from where he stood by the armory, readying the rifles. "You hunted mur-

mions on Katermand. Katermandian murmions. And you know all their tricks. And when they can't find sand the right color to lie on, they make use of special polychromatic piss glands they have to dye it red."

Nemo laughed — a single bark of pleasure only, practically a cachinnation from this rather solemn man. From another he would have greeted the remark — a typical colony joke on his origin and his seemingly endless repertory of woodsman's tricks and lore — with a courteous look of attention and perhaps a blink of bafflement. That the Katermandian showed what for him amounted to an outright fondness for his burly fellow-armorer was doubly puzzling to the other colonists.

The men had been enemies — or rather, Jax had been Nemo's insistent antagonist — during the Katermandian's first year on Firebairn. Nemo was taciturn, stoically compliant with orders, most of the time. Periodically he volunteered an observation or a suggestion. This usually derailed whatever train of thought the others were pursuing and not uncommonly led to a solution of the problem at hand. To this subtly irritating pattern, he added a disposition towards rare fits of stubbornness, when he immovably refused to execute some order. He had spent a number of weeks in the detention cubicle as a result.

Senior staff balanced his recalcitrance against his usefulness and soon realized that a tolerance must be devel-

oped for his occasional infractions. This had triggered Jax's enmity. Jax was a first-rate weapons man, but one of those whose strictness with himself extended to a jealous watchfulness of others' discipline. On a quarrying expedition just before the last rains, Nemo had gone sullen over something and refused an order. Jax had bellowed "Enough!" and stood to confront him. The Katermandian was informed that he would get cracking or have his head cracked.

Jax was bull-bodied, over six feet tall. He shaved his scalp, and his head looked like a battering ram. Nemo Jones was a hands-breadth shorter, and lighter by fifteen kilos. He was not unimpressive — a lean, wide-shouldered man with knot-muscle arms and legs, roped with sinew and vein and hairy as a goat.

But still the smaller man by far. Deep in the grotto of his shaggy beard and vine-thick hair, his black eyes had looked gravely out at Jax. Captain Helion, secretly pleased, turned to direct another matter, but — sidelong — watched, as everyone did. Nemo stood up and made a simple beckoning gesture to Jax.

It was an eventful fight, though not a long one. In it, Jax lost an upper canine tooth, had his nose broken, a rib cracked, his left shoulder dislocated, and received a multitude of astonishingly large and vivid bruises on face, throat, chest and arms. He was a man of courage and picked himself up no

less than four times, but he fell five. Afterwards he harbored no bitterness and would unabashedly describe the fight and his role in it to anyone who asked. He told Nemo that anyone who could fight as he did had to have good reasons for whatever course of action he chose. It was perhaps this magnanimity in defeat on Jax's part that had won Nemo's particular regard. Not only did he laugh aloud now — he riposted:

"No. They always piss green. Diet of gabbles."

"A joke! First a smile, then a laugh, and now Nemo Jones has made a joke! Check the ports. The sky may be falling."

It was Sarissa Wayne, one of the pilot-gunners, who said this. In doing it, she drew more surprise on herself than Nemo's sally had roused. It was customary for all of them to mock his sober formality, but not with the sneer she put into it, nor with the attentive eye to the details of his behavior that her words betrayed. Sarissa was a small, wiry woman, black-haired. Tart and unequivocal speech was more her style than taunts, and it took Jones aback. She joined Angela Rackham, her fellow pilot, at a port on the opposite side of the cabin. The Katermandian, impassive though his face usually was, could be seen for an instant to wonder if there was something about him that made women mad.

Angela put her arm across her smaller friend's shoulders and made

talk about the view. She dearly loved Sarissa's pride but knew that in recent months it had often brought her where she now was — very close to crying with frustration. And she knew that this particular occasion's cause — surely humiliatingly pathetic to Sarissa herself — was jealousy that Jax had had this opening-up from Nemo, and not Sarissa.

Angela had given up offering any direct counsel on the matter. The ardor that so mortified Sarissa it prevented her from making any but the most understated bids for Nemo's attention also made the topic too hot for even the most compassionate handling. Angela would have liked to point out to her friend that the Katermandian's background was such that he had yet to be taught the kind of easy intimacy that Sarissa craved from him. Even to Penny Lopez, whom Nemo was ceremoniously (and without the slightest success) courting — even to her he showed no such openness.

"We are approaching a likely entry point. Pilots below-decks, please." Helion used the intercom, though he might have spoken over his shoulder and been heard by all. Angela and Sarissa were joined by the mechanic, Norrin. They went below, to check the chemical balance of the quarry tanks between decks and then to start the motors of their boats warming. Orson Waverly and Japhet Sparks went to the lockers to start laying out the field gear, while Jax and Nemo got out rifles

for themselves and the captain and stood ready behind him, watching the scene from the pilot's port.

Erosion had broadened a crack in the cone wall, creating a gravel-floored defile that could be reached by a few meters' climb from the desert floor. Helion stopped the sand-hog below the defile. "Reconnaissance party stand by to disembark," he said, again through the intercom. He thumbed a switch. The door coughed open and the gang ramp creaked outwards, downwards to the bright sand. He gave the controls to Penny, took his rifle from Jax, and preceded Jax and Nemo down the ramp.

The defile appeared more than adequate for the boats. Before they were halfway through it, they saw the lake: a vast, brilliant arena of water, steep-shored save for a small beach at the defile's foot. Near the water's center, perhaps two kilometers off shore, was a small, craggy island.

"There's delph here. No doubt of it," Nemo muttered. As was often his way on unknown ground, he moved tautly, "ready to drop to all fours" as Sarissa had once expressed it. Helion disregarded him, but Jax looked at his friend with an air of inquiry, not so much for the remark as for an undertone of unease he had heard in it.

The boats' access assured, they climbed to the crown of the rim and moved along it. The island seemed to be a volcanic plug, an upwelling of magma that had succeeded the cone's

formation by a long time, for it was far less eroded than the wall they stood on, to a degree for which the wall's shelter could not account. They had gone less than a mile when a deep cove in the island's flank was revealed.

"Shit," Jax growled in awe. The cove teemed with delphs, by far the biggest school the men had ever seen. Even at that distance, they didn't need the glasses to see the beasts — scores of them sunning in the shallows, their backs bulging above the water looking like a nestful of silver eggs, and scores more where the cove deepened, playing the leaping game of tag characteristic of the younger members of the species. Helion gazed in silent satisfaction. Nemo-Jones said:

"There's something wrong with the way the water moves. Have you noticed it?"

The captain's face changed as if a sourness had touched his palate. Jax asked, "How do you mean? Where?"

"Out in midwater, this side of the island. Twice now it's looked jittery in a way the winds don't account for."

Helion sighed. "For God's sake Jones. *Jittery*? There's some wind chop, a little swell, the sun dazzle ... just what kind of ominous subtleties do you think you're seeing?"

"It is subtle, Captain, and it's not happening right now. But I've seen it twice since we've been up on the ridge here. Subtle but definite. At the least it means some kind of deep current."

"Jones, you may be sincere, but

you are also compelled to concoct frontiersman's intuitions about even the most straightforward good luck. I've been watching the lake and I saw nothing. What about you, Jax?"

"I can't say I did, but I don't make light of Nemo's eye for things."

"Nor do I make light of it, Jones. It'll go in the log if you wish. Meanwhile our job here seems strikingly clear to me, and I think we'd better get to it."

The Katermandian shrugged, staring not at the captain, but at the lake. "Maybe it's meaningless — how can I say? But it wasn't intuition. It's something I *saw*."

He didn't immediately follow the other two back towards the sand-hog. He watched the water a few minutes more, then tensed.

"Again," he murmured. "Yes, I see you. A convective eccentricity, from some magma vent? I think you're too erratic for that...."

He spat on the ground for luck and hurried to catch up to the others.

z

The boats, moored at the little beach, rode the soft heave of the waters, their armor-glass cockpit bubbles flashing in the sun. The expeditioners stood on the shingle. Nemo squatted a bit apart from the group, watching the lake, meditatively grinding his rifle butt against the gravel. Captain Helion stood facing the other seven. His stance was more erect than usual, truc-

ulent one might almost have said.

"Captain, I have to question this," Orson Waverly was saying. "If you make a special Command Override of it, naturally I'll obey, but it seems needlessly—"

"Needless, Waverly, We don't need delph roe? We don't need fresh breeding stock for the pens at base? Maybe we should radio home and have our surpluses destroyed. Perhaps we should just relax, have a swim, and go back."

"But, Captain," Jax said, "two boats or three — what's the differential?"

"You tell me the differential, Giggans. With three boats out there, we can dye the cove and drive damn near the whole school to shore in one sweep. With two, we might get a third at the first sweep, and then we could go back cruising and gunning all day and not get more than another third from the scatterers."

"But that's just it," Waverly said. "More than two-thirds of a school that size would put the hog near overload. With the tanks that full, half the live take could die on the ride home. It's roe we need more than meat."

Helion's proposal was a distinct departure from his normal style, undeniably unorthodox. Colony procedure was quite explicitly prescribed on this point: one fishing craft was to remain on shore at stand-by during any maneuver in unexplored environments. The captain's numerical assessment of

the situation was not wrong. For a few minutes after a school had been blinded by a dye grenade, it was panicked enough to be moved en masse if the boats' ultrasonic pulsars could effectively bracket it with their crossfire. Here, three boats might handle it, but two could not. Meanwhile, blinded delphs rapidly reoriented to a sightless defensive pattern — sounded shallowly and dispersed — and individuals that eluded a first sweep would have to be painstakingly stalked and harpooned one by one.

But considering the probable yield of even the two-boat deployment, Helion's insistence on the three-boat plan was unreasonable — gluttonous. Waverly saw that his objection hadn't moved the captain, and he added:

"Listen, sir. I respectfully suggest that you're excited by the size of the find. You want to make a record catch. You're letting pride bend your judgment. I'm not rebuking — it's normal, healthy ambition, but—"

"Thank you, Waverly. Now that you've spit out your bit of malice, we'll proceed. We'll start in Formation Delta, assignments as follows...."

When the briefing was done and the group dispersed to their boats, Angela Rackham detained Sarissa to give her a kiss on the cheek. Sarissa did not like the captain, but she had not added her voice to those of Jax and Waverly, and her friend had been able to read from her glances that anger at Nemo Jones in some way caused her silence.

Angela hesitated, then decided to break her own rule in this matter. "Talk to Nemo, Sari," she whispered. "Get it out. What can you lose?"

She didn't wait to be answered, and Sarissa didn't try to. They went to their boats. Nemo was assigned to Sarissa's, and before she got in she watched for a moment his slow approach to it. She almost smiled when she noticed that Helion was watching him too. Nemo's glum silence had contradicted him more painfully than all of Jax's and Orson's words.

In fact, Jones had spoken only once since returning to the sand-hog. He had gone up to Penny Lopez and said:

"Listen, Penny, I think this lake is dangerous. It ... smells wrong. I'm going to watch out for you; but be alert.

Penny had turned to Helion and said, "Captain, Armorer Jones reports a negative olfactory observation on reconnaissance. Should it be entered in the log?"

There was a faint shade of dubiety underlying her sarcasm that caused Helion's jaw to tighten and made him ignore the joke. Her tone betrayed that it was impossible to dismiss absolutely even Jones' most enigmatic misgivings. The captain had directed the disembarkation curtly. When the boats had been driven through the defile, and it was clear the terrain offered their treads enough traction to haul the quarry cages out again, he had the cages taken out and assembled on the beach and then announced the plan he

had not known, till that moment, he meant to propose. Only when he saw Sarissa close her cockpit bubble, securely locking the Katermandian into his place in the expeditionary order, did Helion join Penny and Jax in his own boat.

And presently the triangle of domed ellipsoids slid out onto the breathing blue serenity. Their wakes were so slight they scarcely marred the waters, wherein the colossal wall containing them, all glossy carmine marbled with jet black, was repeated.

Japhet Sparks sat amidships, between Sarissa and Nemo. He had a true cartographer's love for physical creation, and he turned his bony face greedily upon the scene surrounding them.

"By God, look at it! I've never seen such a gorgeous lake. A marine vent for sure — probably along the magma vent at the root of that island. And talk about recent vulcanism — if that island's a day over ten million, I'll eat it. Oh, for a week to check it out with a lung!"

Without turning, Sarissa asked, "How does the water look to you?"

Sparks grasped the allusion, but only granted the gibe an irritated shrug. Nemo stared at the back of their pilot's head. "I didn't say it in jest, Sarissa. What it meant I don't know, but—"

"You gave Penny Lopez a special warning. You didn't give me one." She said it flatly, foreknowing the humilia-

tion it would cause her. Her eyes filled with tears, though she did not cry, and in a burst of anger she violently cut a veering loop out from their wing position in the triangle. Both men nearly lost their seats with the fierceness of the turn.

By the time Helion's corrective bark issued from the intercom, she had already begun pulling them back into the formation, and the captain's order had the effect of aggravating her insubordinate impulse. She pulled back out of position and threw a wide, dreamy parabola across the water.

The bulk of the island lay between them and their quarry, and Sarissa gave herself the luxury of bearding Helion more thoroughly, since it could not jeopardize the success of the hunt. She meandered insolently far afield, enjoying Helion's outrage crackling from the speaker. Then she began a leisurely return, half a mile astern of the other two boats. Both she and Sparks jumped with the shock of Nemo's movement. He sprang from the stern seat and dove for the communicator, whose reply-switch he threw repeatedly, signaling the captain that he wished to cut in.

Helion was ordering Sarissa to dock at the nearest shelving of the island's shore, toward which he already had the other two boats putting in, and there to yield her helm to Japhet. Nemo's signals, far from inducing him to open the line, made him flood it even more furiously.

But in Sarissa's boat he now went unregarded. Both she and Japhet had just seen what Nemo had seen. With a moan of horror she accelerated to catch up, zigzagging wildly as she did so, trying to set up a watery commotion that would draw the eyes of their friends behind them. The other two boats were at half engine as they approached the island. Just astern of them, a huge shape bulged beneath the surface of the lake.

It was not a turbulence, but a coherent, pallid mass that glided after the boats perhaps a fathom down in the water. Subtler, but as horrific, was the wake it left — a greasy surface boil hundreds of meters broad, bespeaking a bulk far vaster than was visible, though that blurred globe was many times the size of all three boats combined.

The two advance craft were scarcely a hundred meters from the island, and their pursuer half as far behind them, when Helion's boat accelerated explosively, a full-drive leap that should have run it straight up onto the shoal. Instead, its thrust snagged and slowed to the leaden crawl that shackles flight in nightmares. Black grass sprouted from the water, engulfing both the boats.

Grass that writhed like snakes as it grew, meters high and dense as on the lushest prairie — a medusa grass, dark as space, its every fibril clutching and raking the air with a blind and busy greed. Angela's boat was completely enmeshed, its stern cocked high above

the water, turned weightlessly in the shuddering weave as a bug is turned by the spider wrapping it. Helion's boat, however, was gradually tearing shorewards from the net, whose grip its burst of speed had half-foiled.

And now Sarissa had reached them. At ninety knots she swerved obliquely to the uncanny meadow and plowed across its fringe. A shockwave, as of pain, rolled through the field. Helion's boat lurched free, roared through the shallows and plunged, spraying sparks, up onto the island. Sarissa's drive had slowed to fifteen knots before she herself fought free into the shoals that fringed the isle and which the monstrous growth had not invaded. She swung parallel to the shore and tucked the boat into an inlet.

The colonists jumped from their vessels and gathered on the shore. Jax and Nemo broke out the rifles, but those they gave them to held them helplessly, standing in a rapture of horror, watching the struggle. Then, near the meadow's center, the pale bulb rose and swelled up from the water.

It was a titanic eye — a transparent orb of gold, intricately veined within, the pupil a scarlet rhomboid into which five sand-hogs could have driven abreast. Deep in the yellow ichor, black shapes moved, whole constellations of them swarming through the kelp-like jungle of veins; while outside the globe, round its base, a collar of huge, tongue-like tentacles stirred, stretched, and licked the air. With cy-

clopean sloth the whole orb rolled within this tentacular calyx and aimed the red vent of its pupil upon the captured boat.

And now a dreadful purpose entered the action of the fibrils. Various, testingly, they turned and tilted the craft, probing and caressing it in every orientation. There was a grinding noise. As a man might open a jar, the creature twisted off the boat's cockpit bubble, inverted and shook its hull. Norrin and, a moment later, Angela Rackham tumbled down into the black seethe. The fibrils heaved and cata-paulted the boat away. It crashed on the island's shore.

All that the watchers did was as a dream. Jax and Nemo pumped explosive shot against every part of the eye and its corolla. The grenade slugs produced only negligible tatterings of its gelatinous substance. Sarissa struggled to free a coil of harpoon line from the wrecked boat's equipment locker, while Helion and Penny helped Sparks lift Orson Waverly from the space beneath the control panel where he had wedged himself and where he now lay bleeding and comatose. But these were ghostly acts, performed in stupefaction, while every man and woman did but one thing — watch Norrin and Angela and the thing that had them.

The black meadow undulated still, but less chaotically, with an insistent, peristaltic surge that brought the victims towards the eye. Like castaways caught in a hideous, slow surf they

struggled in the snakish, multibrachiate grip — clutched, stroked, raised and dipped, but always eased inexorably nearer the eye. The colonists saw now Norrin's arm clawing sunwards, festooned with serpents, now Angela's back and shoulders, bucking to wrench her head free of the nauseous swell.

The tentacles nearest the victims began an obscene elongation, till finally two of them plunged down and plucked the captives free. Swinging them high, the tentacles brought the women inwards and poised them above the alien pupil, which moved below, as with a savoring gaze. The tentacles uncoiled. The women plunged into the red vent and sank kicking down within the golden ichor.

In the eye blink of their vanishing through that red chasm, they entered another world and were transformed to different beings. Drifting down they came within the eye, dancing the drowning agony in a tempo surreally slow, an almost comic pantomime of life's wrenching-free from its frame. Their faces and limbs were bloated, corrupt of color in the amber light. Angela's hair bannered wantonly, slow-motion, while those on the island could see her eyes — black holes in a gape-jawed mask — aimed downward on the swarming deep she sank to. Webbed veins, huge, crooked roots now partly screened their fall, which showed in glimpses as the overall organic movement within the eye began to boil with a new energy.

Those on the island watched what followed with an amazement so complete it looked like rapture. At one point, responding no doubt to some impulse to avert his own eyes (though he never did so), Nemo Jones cried out:

"Don't look away. Remember details. We've got to know it to kill it."

His companions needed these exhortations as little as Nemo himself did. Forgetting even to attend to Waverly's serious head injury, they watched as if the universe and all time contained no other thing to see. And there were many details to be remembered.

Firebairn's moonrise is two-phased. The first one to rise is so small it looks like a huge, slightly blurred yellow star. The second follows in about three hours and at full is a large silver disk. Colonists had come to speak of the "pendulum" rising rather than the "moons," because three bright stars, forming a neat perpendicular to the horizon, connect the moons for the first two hours after the second one's appearance, and the latter, especially when it is in a crescent phase, seems a weight depending from the golden pivot of its higher, smaller sister.

The pendulum was just up, and it was cold. The group sat in a circle around the camp's field stove. Helion sat closest to its light, more visible, more erect than the others. But there was less pride of rank in his posture

than an air of pained self-presentation, as if in response to a tacit charge lodged against him by the others slouched tiredly in the shadows. He had been arguing with Nemo for the last five minutes. Throughout, his normal inflexibility had been accompanied by an uncharacteristic calm. Now he shook his head definitively, rejecting in the gesture not only all the Katermandian had said, but all that he might say. When he spoke, it was formally, his eyes sweeping the whole group by way of preface.

"You will all, as a body, formally depose me and place me under arrest, to which I willingly accede, or you will do this as I prescribe, and with the personnel I have designated. There is no more to say, Jones. Take it or leave it."

The Katermandian squatted on his hams. The light escaping the shadow pools over his eyes was baleful, and this the captain saw; but it was also — and this Helion did not see — compassionate. He set his words out carefully:

"Listen, I beseech you, Captain. You have all the good of pride, as well as the bad of it. You want to atone for our danger, but you've done no real wrong. If you've been foolish, why, everyone's a fool! I've been one thousands of times — it's a wonder I'm alive! It's my plan. Do you want to throw on me the guilt of having someone else take the risk of it? You *know* that Jax and I are our best swimmers...." He gestured awkwardly, breaking off. He read his failure in the

captain's sour smile before he heard the man's answer.

"The plan was yours. The log already so witnesses. Our need for it, our predicament here, is wholly my doing, and the log testifies this as well. My decision is as before."

Nemo stood up. He nodded and stepped out of the circle. The wind was freshening, but he left the shelter of the hollow they had camped in and climbed up to the island's saw-toothed crest and found himself a seat overlooking the delph cove, some hundred meters below. He had not been there long when his fellow armorer joined him. They sat in silence for a while, watching the pendulum and, alternately, its image in the molten black mirror of the lake.

"That time we fought," Jax said. "I truly deserved the beating I got. I told myself it was your contempt of duty that enraged me. In fact I knew you were guilty of no such thing. It was simply that I envied your freedom."

The way Nemo jumped on these words revealed that his silence had masked a purpose. "You feel trapped now, Jax, right? You're as much as saying goodbye with that speech. You *are* trapped in this plan. It will fail. With Helion leading it, without me along, it's doomed. He's brave but he has no style, no hunch-nerves. Please. Refuse your post. *Force* him to use me. Your dissension will have more weight with him than anyone's."

"What a storm of words! You've

put more of your voice in my ears in the last two hours than in all the year I've known you. No. Sorry. And it's not necessarily because I don't believe you."

"Shit." Nemo said this mournfully, looking now more directly below their perch to the cove. Only eyes which had watched the school at dusk, when the beasts found berths in the fissures of the shore and emptied their flotation sacs to sink to their rest, could have found them now in the moonlight — vague torpedoes of silver just under the heave of the black water.

He scowled at them. The austere disapproval of his expression might have been that of some creating deity gravely displeased with what he had wrought. It was Firebairn and its unique biogenerative forces that had made the delphs, of course; Nemo had made only an escape plan which enlisted them. He looked again at Jax, his eyes bitter, refusing to speak his request again, but also refusing to withdraw it. For answer, his brawny friend turned his face, wryly, to the island's northern quarter, where all explanation of the morrow's insanity lay.

It looked like an immense planktonic toadstool now, the pale orb still exposed, though half sunk from its former elevation. The field of cilia was similarly contracted. Only the tips of the tendrils showed, bristling the moon-polished waters, a field of thorns. The two men stared at the thing for a long time.

"It is watching us," Jax said, speaking his decision in the debate that both had pursued internally. All useful speculations had long ago been traded, mutual conjecture exhausted. "So huge it is, and so sharply *aware*...."

"It had to be Orson blinded," Nemo raged. He spat towards their enemy. "Something that big's got to be marine, up that vent, and that's the maddening thing. Orson's been sidelin-ing in marine studies all this last half-year, always going out to Base Two to talk to their biomaths. And if we just knew how it worked, maybe there'd be...."

"Be what?"

"Maybe there'd be some way *into* it. I'm sorry I never spoke this plan. The more I think, the more I feel it — there's no sneaking past that thing, it's got to be killed. Gotten into."

"Who's that?"

"It's Sarissa."

The pilot-gunner was climbing towards them, choosing her handholds from the crag face as easy and sure as a woman gathering shells from a level beach.

"Orson's completely conscious now. He took some broth."

"Thinking straight?" Jax's eyes winced slightly at the brutality of his own question.

"Yes. He's not lost to us — we both think he can help, and he wants to talk to the two of you right now."

The men got up, but Sarissa did not move yet. "The captain's asleep," she

said. Nemo heard the shade of pity in this — Sarissa usually called him "Helion." "We're all agreed he's to be left out till we work out what we want to do. Penny didn't want it that way, but she gave in to the rest of us." Her eyes flashed briefly to Nemo's here. The three started down.

It was past midnight when Captain Helion was wakened. Jax and Japhet told him the group's proposal. Any innovative consensus among his subordinates could now only strike the exhausted man as veiled mutiny. He gave Jax an *et tu, Brute* look, and stared disgustedly into the glowing coils of the camp stove.

"It's clear you'll all do what you want. Kindly trouble me with no further parades of obedience. Spend the time any way you please between now and tomorrow."

"No! Someone bring me out to him. Captain!"

As surprised as Helion, Jax turned to help Sarissa and Nemo carry Orson Waverly's camp chair into the center of the circle. The biologist's eyes were bandaged. Some few tears of blood had escaped the bandages and tracked his cheeks.

"Captain?" The face scanned, hunting a voice-fix on Helion.

"I'm here, Waverly."

"Listen, Captain. Don't slacken now. Give us strictness here, where we need it. This will have to be a systematic information-pooling, using the log. Make it official to make it strict. This

thing is epochs ahead of us in its adaptation to this world. We had better evolve a very sharp and efficient group mind to fight it with, and do it pretty damn fast, or else we're all going to die, and you've seen how we're going to die."

The captain rose to the occasion, but only just. He nodded. "Wake me when it's my turn." He went back to his bed.

The second moon's setting came three hours before dawn that morning. Nemo and Orson Waverly sat by the stove. Everyone else was asleep. Waverly had just turned off the log, which he'd had on playback, and now he sighed. The two men's ears still rang with all the perplexities the tape had woven round their weary minds.

"Two distinct groups of carnivores inside the sphere," Waverly said monotonously. "The members of both working in subgroups. Packs. The individuals in both groups anchored by slender umbilici to the base of the sphere. In both cases — Shit! Shit shit! My brain is a knot. There isn't a nerve in me that's not twisted into a rock-hard knot. If I could just have a look, the faintest, five-second *glimpse* of it! Words! Dear God, for an image — a true, solid, detailed, polychromatic *image*. Grotesque caricatures is all I get out of this, meaningless exaggerations of the chance suggestions sparked by all these endless *words*!"

Silence followed. Listlessly, Nemo asked, "Caricatures? Like what?"

"Fat-headed, taper-tailed, saw-mouthed fish. Sharks. Sharks and squids, swimming in segregated schools in a spherical tank full of kelp."

"Kelp? Sharks?"

"Kelp is a terrene marine vegetable, grows in long stalks. Sharks are marine carnivores. So are squids, invertebrates with beaks centered inside bouquets of tentacles — like those other things you described, except squids have fewer tentacles and most of them are the same size.... You know, I find myself wondering about those tethers. You said that both the squids and sharks patrolled everywhere, but the two kinds of school never intermingled, correct?"

"Yes. They always dodged each other very smoothly."

"But both groups had the same kind of caudal umbilicus, of a pale almost translucent material, very slender, tough and flexible. Now what about the anchorages of those unbilici to that — basal muck that everything in the globe was rooted in? Was there any kind of pattern to their attachment down there? Did they attach just anywhere, or in clusters? If the latter, were the clusters segregated as the organisms themselves were?"

Nemo considered for perhaps half a minute. "I just can't be sure. With the prowlers' anchor lines all crisscrossing higher up, and with all those big kelp

stalks — down at that bottom level my eyes just couldn't unweave it all. But you've reminded me of something else about those lines anyway. The squids fed second, milled around very excited all the time the sharks were feeding. Then, when the sharks finished, a lot of them sounded for the bottom of the eye — I didn't see even as much as Japhet did about why they did that — and the squids moved in for their turn. When they did that, I saw one of them get its tether snagged on a kelp stalk. I think it sensed it and tried to double back, but the others were crowding it along, and the tether broke."

"And what was the effect of the tether breaking?"

"It forgot about feeding. It swam a corkscrew pattern for a minute and then, like it had suddenly got a fix, sounded straight for the bottom. I lost it in the kelp, but when it came back up about a minute later, it was trailing a new tether."

Waverly said nothing for a long time, and Nemo became immobile, like a pair of hands intently cupping an embryonic flame, cherishing it to life within their stillness. But at length the biologist sighed again.

"I was guessing the tethers were some sort of alimentary connection with the larger organism. But how could such a pipeline be so delicate, and so quickly repairable? We'll have to set it aside. I want to hear Japhet again. There're some suggestive things in his description of the feeding process."

Orson felt for the rewind button on the log and punched it. Nemo checked a notebook for the calibrations of Japhet's report and hit the replay switch when it appeared on the gauge. Orson Waverly's voice came from the speaker.

"OK, Japhet. Now let's move to what happened on the inside. What did they do to them?" "Them" meant Angela and Norrin, well-loved by all, not least by Japhet. There was a silence in which the cartographer worked to find a steady voice.

"They were alive. I think that fluid in there half-paralyzed them somehow.... Their bodies were swelling too, very noticeably after the first few seconds, and they sank slower than — than you would have expected. There wasn't much fight in their movements, but they were struggling some. Just about when they'd sunk to the top of all that.... seaweed, all those long purple stalks — just about then those first things hit them, the big, saw-toothed ones with the black studs all over their — their brows, I guess you'd say. Little knobs set in stripe patterns. They reminded me of delph eyes. Anyway they hit them first. Started tearing chunks out of them, out of every part of their bodies, swarmed on them like ants so that both their bodies just looked like two wriggling clusters of those things. Their blood — Angela and Norrin's blood—" Japhet stopped, then resumed, talking faster. "Their blood came out in clouds, and the

swarms of the things were pretty much hidden in the ... the smokiness of it. But I think there was a high turnover, no one of them fed long, and it looked like most of them got their ... turn."

"Yes. I'm very sorry about having to do this, Japhet. Did they keep sinking as they were being fed on?"

"Very little. The feeding swarms kept them up in the upper levels of that seaweed tangle. And it was pretty abrupt when the last of them all broke away, a couple seconds when the two of them, their remains, just hung there, started sinking again...."

"Yes, Japhet. I'm sorry, but the remains. I need everything."

"All the flesh gouged off!" It was a shout, a burst of rage evading intolerable pain.

"Please, Japhet."

"Most of the skin and muscle bitten out. Skeletons still held ... held together by scraps of tendon. Maybe half the entrails still hang — hanging from the body cavities. Skulls intact. The parts inside the ribcages too. Then the others converged all at once. They seemed to concentrate on the upper parts of the bodies. It was like with the others. If not all of them took their turn, most did."

"Listen, Japhet. Helion and Penny and Nemo all thought that the squid-like things were feeding, like the saw-toothed ones, and they also agreed that there were close to a hundred of them. Now it seemed to me, given the number of them, and how little was left of

their prey ... forgive me, but it didn't seem to me that there was ... enough to go around. Would you say you were sure these tentacled things were *feeding*, devouring lung and brain tissue?"

"A good place to feel a doubt." Japhet's voice warmed a little. He sounded grateful for the balm of reportorial objectivity. "It was clear that they gnawed through the bone in both places. But my feeling was that after they had gnawed through, they discharged something *into* them. They would hug tight with their tentacles and give a kind of shudder, and it didn't seem to me they were taking something out so much as pumping something *into* the chests and skulls...." His voice died again as the frail defense against pain crumbled. Waverly said quickly:

"Thank you, Japhet. That's very vivid. Just two other points now. First, is it correct that once these second attackers dispersed, the remains of our friends suffered no further assault and were left to drift down to the basal muck?"

"That's right. They sank down and I lost sight of them."

"Fine. Now most of the others agree that these squid-like things, after feeding or whatever they were doing, returned immediately to their circulation within the globe — went back to cruising around, and, as Penny put it, tickling the walls of the globe with their tentacles. And, in fact, most of them were back patrolling before the

shark-like things were. These had fed first but, after feeding, had sounded to the bottom and took longer to get back to their patrolling pattern than the second group did. Tell me if you agree with this, and, if so, tell me anything you can about what they were doing down at the bottom during that time."

"You've got it right. And I think I can tell you something. I had just one clear glimpse of one of them while they were down there, through a gap in the stalks. It was a quick look. But I got the impression it was half-burrowed, head first, into that spongy layer everything was rooted in. Stuck halfway in with its tethered end clear and kind of vibrating or trembling. That's all I can be sure of. After a few seconds the whole eye shifted slightly and I lost sight of the thing."

"Remarkable. No one else saw that. Maybe it'll help. Thank you, Japhet. Thank you very much."

Waverly felt for the switch and turned off the log. "Christ! My poor aching head. It doesn't help. So far it doesn't help at all. I feel like a god-damned square wheel. I can't get any kind of interpretation *moving*. It's stupefying, this bizarre complexity. The field of prey-snaring cilia, the central, mouthed dome of intestinal structures, surrounded by a calyx of major cilia — there are pseudo-coelenterates they've found over at Base Two that have these features. They're littoral benthic zone dwellers — one meter across at the biggest, god-damn it, and with

nothing like this kind of endosomatic complexity. There might be bathic varieties that are bigger, but the things are sensorially impoverished, slow, groping, tactile hunters. You say this thing tracked our boats towards the island and is now hemming us in, dodging laterally to catch any move we try to make from shore. This thing sees or smells or hears or all three. Monstrous. Incomprehensible. I need more medicine. I need some sleep. Maybe the answer will come in a dream. But I'll give you one thing to dream on, Nemo. If this thing does in some way follow the model of those little pseudo-coelenterates they've found — if it hangs proportionally deep in the water and is able to expand as broadly in the lateral dimension, then its tail end hangs down into this lake for at least half a kilometer, and its field of cilia is able to hug this island's whole perimeter, or damn near it, in its loving embrace.

"Take me to my cot, Nemo, and God help us all. Helion and Jax are going to die tomorrow. I'm sorry, but this seems to me a simple fact. I've told them what I'm telling you, but I couldn't change their minds. So I say to you now, brutal though it is — choose vantage points from which you can see down into this thing from all possible angles. Have the log's microphone run out on an extension, and issue field glasses. When our friends die I want it to pay off with every scrap of sight and sound that can be gotten out of it. If Polyphemus takes their

lives, it's going to betray itself to us in the process. Wake me an hour after dawn, and don't fail me. By the time they set out, I'll have a list of specific questions I want answered and some final arrangements I want made."

Just after dawn, Sarissa Wayne climbed to the ridgetop where Jax and Nemo had sat the night before. She settled down and watched the preparations, already well along, being made in the delph cove below. She and Penny had begun them. The roll of metallic net that each craft carried had been taken from its spool in the stern of Sarissa's boat and brought over to the cove. One end of it was anchored to the cove's southern spur, and then she and Penny had swum it across the cove mouth.

They had made marvelously silent work of it, and only partly for fear of waking the delphs, which Jax and Helion were already edging up on with the tranquilizer guns. Polyphemus — this was what Waverly, without explanation, had bitterly dubbed their persecutor the night before — Polyphemus had already demonstrated how swiftly it could pour itself around the island's perimeter. The previous afternoon the colonists had done some experimenting. They had driven Helion's boat — only slightly damaged — to the opposite side of the island, choosing a launching spot more than four hundred meters upshore from Polyphemus' visible limit of extension.

They detached its harpoon winch, anchored this ashore, and tethered the boat to its cable. They set it on autopilot with just enough fuel in the tanks for a few hundred meters' run. It was making thirty-five knots within the first four seconds of its launching and was snared by the giant's sudden-sprouting tendrils less than seventy meters offshore.

The capture was not resisted — cable was paid out as the titan wrestled its prey towards its central orb. But the craft never reached that organ. Well before the cilia had brought it within the grasp of the larger feeding-tentacles they froze, still gripping it. A few seconds later they flung it into the air and, by the time it had struck the water, had vanished from beneath it. The colonists hauled the boat ashore, feeling themselves, if potentially wiser, no less baffled and terrified.

Swimming in the black, predawn waters with this recollection of the giant's speed, its inscrutable responsiveness, had been the closest thing to a lived nightmare in Sarissa's experience. Her legs could still feel that ticklish expectancy of Polyphemus' caustic, sticky first touch. Her heart still remembered its terrifying, clamoring power, and her shoulder muscles their spring-steel readiness through every second it had taken to string the barricade.

But her mind was now wholly detached from these bodily memories. It was not the scene below her that so distracted her. The tranquilizer darts used

on captured delphs to prevent their panicking and crushing one another during their transport in cages to the sand-hog had paralyzed six of the creatures in the cove. The men had collared them with cable in two trios, staggered so that the middle delph of each trio was positioned half a length in advance of its flanking fellows. The trios had been tethered to shore, and though the beasts were just waking and getting restive, Jax and Helion were able to slip into the undercarriages they had rigged and test their fit. Their boot heels were just visible through the water, kicking for purchase under the tails of the delphs. Their recirculating respiration packs made no more than a faint boil in the water, and this the delphs's motion, once they were goaded forward, should obliterate.

Sarissa's own life, and those of all the others, depended on this grotesque rehearsal, which did not alter her staring inattention. Her preoccupation was elsewhere, its focus revealed when her eyes narrowed at Nemo Jones' reappearance in the cove. He came down from the knoll that flanked it, where he had been helping Japhet make the two harpoon-gun emplacements she had requested the evening before. He went straight to Penny Lopez, who was working on a release mechanism for rolling back a segment of the cove barrier when it was time for Jax and Helion to make their sortie. Whatever Nemo said to Penny made her straighten and face him.

He talked to her for perhaps a minute, and when, with a queer formal bow, he left her, Sarissa's eyes didn't merely fail to follow him — they refused to. Thereafter, she didn't watch anything in particular so much as she avoided watching that sector of the crag that lay between herself and the point from which Nemo had left her view.

"Sarissa. Sarissa. I have something important to say. Will you talk with me?" The question seemed necessary to Nemo, as she had not looked up when he saluted her. Still not looking she said:

"Whether or not I'll talk to you depends on what you have to tell me."

Nemo nodded at this and sat down at a discreet distance from her so she would not have to strain to keep him out of her field of vision. He looked at the sky a minute before saying, "I've just given Peny Lopez my apologies and told her I was withdrawing my suit for her. To disappoint a woman is always grave, so no lying should go with it. I confessed to her—"

Sarissa snorted, shook her head and, visibly in spite of herself, began to laugh. Nemo looked at his knees and waited humbly. Sarissa had to make several attempts before she could speak her retort:

"To disappoint a woman is always grave." Nemo, I swear to you. I was watching your exchange with her. After you walked away from her, that poor woman literally jumped into the

air and clicked her heels together. If she doesn't live another day, if none of us do, she'll at least have that last day in peace. She's *never* wanted you."

"I agree her feelings are mixed. But I have never entirely displeased her. Once I had stated my case to her, last summer, she became sarcastic and piquish to me. Some of this is a kind of coquetry, for which a woman must be forgiven, as it is a natural defense against capture. But she started out—"

"What did you confess to her?"

"She started out not entirely disliking me. I confessed to her that the woman I first chose, first desired — that I did not lay suit to this woman only because she *did* entirely dislike me, and though I am not faint-hearted, it's a fool that sets out hunting impossible quarry."

Sarissa looked at him now. She studied him with wrath, perplexity, relish. "What was this woman's name, this first choice of yours? This select soul, this feminine paragon, this august personage who merited Nemo Jones' initial designation as his mate? Bless my ears with this pearl's name."

"Sarissa Wayne."

"Horseshit."

"Horseshit?"

"Yes. The shit of a terrestrial quadruped. Invoked by some terrestrials to denote absolute disbelief." Her fine-boned little body fairly danced on its seat with contained kinetic impulses, making Nemo think of the way a candleflame sits on its wick.

"You were caustic and curt to me from the very first, Sarissa. Mocked every advance I made to you. At least Penny started out being nice."

"To make Helion jealous, you backwoods dolt. And you never made any, not the *slightest* advance to me!"

"Horseshit."

New movement down in the cove distracted them momentarily. Helion and Jax had begun to goad their "mounts" through some elementary paces. They did not use the sonic pulsars designed for delph herding — all too probably detectable by Polyphemus — but small electric prods that Jax had improvised. The method seemed to be working, though it produced an uncharacteristically jerky movement in the beast. The sun's edge kindled on the eastern crater rim. Sarissa and Nemo faced each other again.

"Name one advance, Jones. Just one, in explicit, unmistakable detail."

"Our very first expedition together. When you harpooned that hydra—"

"That! Huh! You did all you could to steal my thunder and show off your swimming and then tossed me a compliment like a meatless bone, that I was a good shot."

"I dove in to cut you the trophy from your kill — the gravest gesture of honor among my people! I brought you back the major tentacle and I said you were a *master* shot, not just a *good* shot. You wouldn't even meet my eyes. You could have read how I meant it *there*."

"Hogwash! You—"

"Hogwash?"

"Shut up! You made that showy twenty-meter dive from the crater wall and had butchered the prime cut from my kill before I could get it even half reeled in! You—"

"Where else could I have dived from? That's where I was *standing*. The gesture has to be immediate. It's a huntsman's acclamation for a great hit! You don't say excuse me and climb down to a more seemly—"

"What *other* advance did you ever make to me? Hey? Name one other."

"Two days later. I went up to you to explain after the council meeting. I brought you—"

"You walked up dragging the god-damned trophy you'd cut off *my* kill! You had *tanned* it. I was with the other gunners, and just then they were congratulating me on that shot, and just then you walk up to me grinning like a fool dragging that suckered *hose* you...."

Her indignation lost steam, punctured by remembered regret. She hadn't needed reminding of this scene. At the time, seeing the uncouth Katermandian approaching her with his four-meter, snakelike token of esteem, Sarissa had marveled to herself that pleasure and mortifying embarrassment could ever be so compounded as they were in her own mind then. She did something she had never done before. She fled. Croaked some excuse to her friends about checking her gear,

turned, and ran. Even so, she didn't manage to flee an excruciating awareness of the scene. She saw her hapless suitor, nonplused, speed up to pursue her and ensnare the ankles of two of her colleagues in the trailing tentacle so that one of them — it had been Angela — was toppled from her feet. Later Angela had laughed about it and, after feeling out her friend's emotions in the matter, had said to her:

"Listen, Sari. Nemo is a wonderful man. There's no petty pride in him. He took that dive out of pure joy in your shooting. He's a Katemandian, sweetheart! Naturally he's going to embarrass you. He's *courting* you, girl! You're going to let embarrassment stand in your way? Toughen up. Take him for a walk out where there's no one around, tell him you want him, and explain to him how to avoid embarrassing you. He'd jump at the chance to please you. He's only lived a mere thirty-six years in deep rainforest. You want urbane manners and conceited reserve? You want Helion?"

The advice came too late. Sarissa could not immediately conquer her reserve towards Nemo, and soon the Katemandian had retreated to a melancholy, unvarying courtesy with her. He began his formal courtship of Penny a few weeks later. Now, renewed grief for Angela filled Sarissa's eyes.

"Forget what I just said. I know how you meant it all. Angela made me see it. She was always telling me you were a wonder ... a wonderful—"

She stopped when she realized her voice was going to break. She turned her face away — sensed rather than saw Nemo's sudden move to comfort her and prevented it with a violent straight-arm. A long silence followed. They both watched the cove. Jax and Helion had their teams fairly well under control now and were maneuvering them around with such energy that every delph in the cove was wakened and the water seethed. In spite of this Penny was running tests on the barrier-opening arrangement and managing not to lose a single delph in the process. At length, Sarissa took a deep breath and stood up determinedly. She turned to face Nemo.

"Jones, you miserable idiot, I, Sarissa Wayne, want you. I want you to pay suit to me, to love me, and to make love to me, and not ever, at all, to anyone else. That's how it is. So answer me now, once and for all. Let's face this and have it done, one way or the other."

Nemo nodded energetically, but though his mouth opened, nothing came out of it. Apparently, this ardent inarticulacy conveyed an answer to Sarissa that she found satisfactory. She wrapped her arms around his waist and pressed her face against his chest. He held her, looking over her head towards the sunrise, and clearer than the happiness his face showed was his amazement. All in his world had been craft, the stalking, second-guessing, and teasing-out of quarry from the

hostile complexities of its habitat. To have Sarissa, whom he had thought irreversibly inimical to him, holding him with such single-mindedness, was to him in the nature of a prodigy. It was as if, in his native rainforest, an archdand — that wily, toothsome biped, splendid-winged and brazen-taloned — had leapt from its cover in the dense warp-vine and sparx and — far from dodging away with invisible speed — had ambled up to the astonished hunter and dipped its head to nuzzle at his hand. The pair did not notice the two figures approaching them until they were in speaking distance and one of them, Japhet Sparks, hailed them.

Sparks was leading Orson Waverly. The lovers broke their embrace — not out of shame, but from a chilling of their hearts. They knew Waverly's errand. Sarissa helped him to a seat. She, Nemo and Japhet — all those who must be Waverly's eyes — now looked only at him, not down towards the cove, not at each other.

"I've already briefed Penny. I wanted to do it while they were still in the water. They know what I'm doing and approve, but it's pointless to sicken them with the sight of my actually doing it. So let's be quick. The captain will be assembling us for his own briefing in a little while, as soon as he and Jax make some last adjustments to their undercarriages. Sarissa?"

"Here, Orson."

"The guns from Helion's and Angela's boats are set up. Japhet's

wound double cable on the winches and got the guns anchored where you wanted them. Give them both the field glasses, Japhet. Hang these around your necks now. Get them focused for Polyphemus immediately you take up your positions. I want you on the knoll across the beach from Sarissa's, Nemo — Japhet has it worked out. You'll be on the other side of the thing from her and almost as high above it. Penny and Japhet will be shoreside, watching it from different angles. They'll both have mikes we've rigged to the log. I want to get any sound any of us makes correlated with a running account of its moves. We want all its behavior, and every possible synchronicity of that behavior with what happens around it.

"Because of course we can't assume it sees, just because it looks to us like an eye. It twisted our boat open like — someone unstopping a specimen bottle. But it could have felt organic presences inside vibrationally, electrochemically — we just don't know. I'd been jammed in under the panel and it missed me. It makes me think the thing does see, and my invisibility to it saved me. If it does, I don't think Jax and Helion have a prayer.

"Here are my specific questions. First and foremost, how precisely does it track us? Every detail of its behavior that we can correlate with any detail of its *prey's* behavior—" Waverly's mouth moved speechlessly a few times. He resumed more quietly. "If we can

relate these two spheres of activity in any new way, we may get a key to how to dodge it. Killing it seems to me as good as impossible. Nevertheless, it *has* occurred to me that if we understood its feeding mechanism, we could conceivably poison it. Its whole alimentary set-up is one of the things that confuses me most. These quasi-independent packs. By the time they're through with the prey, it's just a carcass, seventy percent reduced in volume, that drifts down to the base of the orb. If they are highly articulated organelles, if they are the digestive apparatus itself, how are they transmitting the nutrients they absorb to the macro-organism? These threadlike, breakable tethers seem ludicrously unlikely as transport ducts for nutrients of such bulk. If they are not transferring the nourishment, then Polyphemus itself must be a kind of huge detritivore, nourished by the sharks' and squids' carrion leavings. But then why the gross volumetric disproportion? Why does Polyphemus get forty percent, at most, of every kill, and these ... predacious saprophytes sixty or more? What service to the whole rates that big a part of the take?

"But to test this, study the basal areas all you can — Sarissa and Nemo especially. That's why I've got you high. Look for ... feeding debris, its relation to the inner landscape of Polyphemus. What's the structure down there? If motile, how does it behave? Japhet and Penny will be studying the

packs more particularly, but I want all of you to be constantly checking the whole, trying to catch overall gestalts of movement, responsiveness and what stimulates it.

"With the squids and sharks, two specific things interest me. Watch for waste excretion in any form. They could be using a selective fraction of their intake and be producing usable wastes that Polyphemus absorbs. Second: You all seemed to be in agreement that the squids didn't appear to consume nearly as much as the sharks, if indeed they actually *fed* at all. Precisely what were they doing? Study that closely.

"That's it. As far as productive guesses go, I've got next to nothing to offer at this point. This thing is completely incredible. God help us to think effectively together, because, so far, I am truly in the dark."

Midmorning on Firebairn is, next to sunset, its most golden hour. The jumbled colors of the igneous wastes blaze, melt, smolder under the sky's brilliance as if the land were still in its molten nativity. And in this particular place the young sun kindled a special jewel even more dazzling than the vast ring-wall, or the waters contained by it. As Nemo climbed the knoll assigned him, he looked upon that jewel with loathing and wonder. Within the sphere of lustrous amber, the patrolling packs wove their own distinct col-

ors through the black and purple jungle. Those that Waverly called "sharks" were especially striking. Their torpedo bodies had streaks of pigmentation that flashed iridescent as the things cruised through the filtered sunlight. Nemo thought of the cove — invisible to him now beyond the ridge Sarissa stood on — from which he had just come. Helion, mute and business-like, had turned directly from the briefing to the water and slipped under, snuggling himself out of sight beneath his harnessed beasts. But Jax had paused by the brink so that Nemo could take his hand. Nemo had said:

"Lucky fellow. In an hour you'll be in the sand-hog, radioing air rescue."

The big man had smiled, glanced at the binoculars hanging against the fur on the Katermandian's chest, drawing their owner's eyes upon them, filling his heart with wretchedness. But Jax had grinned:

"That's right. Use these, and when I climb ashore you can see me waving to you."

Nemo had reached his position, but before he signaled to Sarissa, he looked down on their enemy. He pressed his clenched fist against his chest, which is the way the hunters of Katermand take oaths, and he said:

"Hear me, Polyphemus. My name is Nemo. Nemo Jones. And I am going to rip the life right out of you. We together will find the way, but it's me that's going to do it to you."

He raised his arm and signaled to

the short, slight figure manning the guns on the next knoll over. Even as he had turned his eyes away, a detail had snagged at their periphery. He caught up his glasses and trained them on the orb, at a point deep within the anchorings of the kelp.

Sarissa hesitated. Japhet, Penny, Nemo — all were stationed now, but for a moment she found herself unable to pass on the go-ahead to the cove. She checked the welded cable moorings Japhet had rigged for the guns and for the third time reassured herself that the crag she stood on would break before they did. She looked down into the cove, where Orson waited for her word, the barrier-gate's pull-cord in one hand. Jax and Helion held their beasts ready — not near the gate, but by the shore of the inlet, for before they emerged themselves they would drive out a large part of the school ahead of them and thereafter keep as many of these as possible around them as they penetrated the dangerous waters offshore.

The delphs had swum unmolested past Polyphemus; some of them had even cruised through its peripheral field of cilia. It was one of the first observations they had made the previous afternoon, once some measure of organization had succeeded their initial trance of horror. The plan had seemed good. Now, without any of Waverly's biological training to reinforce her pessimism, she felt a gloom as deep as his. It was not going to work. It would fail

because Sarissa now had everything to lose — not just her life, but Nemo as well. Whenever the heart prayed entirely for luck, that was when luck failed. She cupped her hands by her mouth and, in a tone scarcely louder than conversational, said:

"Now."

Orson, seventy meters below, pulled the cord. When Jax and Helion saw the opening, they launched prearranged, converging drives on the gate that cut out about two thirds of the school and herded it before them. "Close it," Sarissa said. Orson relaxed his grip on the cord and let the gate spring back. If the sortie failed, its survivors would need food.

The shepherding of a protective screen of free-swimming delphs did not start well. The trios were bulky enough to exert a local dominance on their unharnessed fellows, but too awkward of movement to work the group as a whole into any formation. As the teams edged past the sheltering horn of the cove, the school began to dissolve before them, individuals and couples — gamesome with the unpent tensions of their confinement — dispersing swiftly. Sarissa watched the two men's cover bleeding away, branching out into the lake in quick, silvery trickles. She ground her teeth and looked to Polyphemus.

The giant was half the island away — the knoll she stood on walled off the cove from its vision, if vision it had. And with the captain and Jax angling

sharply away from the giant as they penetrated the open waters, they would be three quarters of the island's length distant from it before the shoreline ceased to mask them. It was not conceivable that two men, the subtlest shadows of men, really, clinging to the undersides of living screens twice their size, could be detected at such a range. And still Sarissa groaned at the steady shrinkage of the school. As the lure of open water grew stronger, the clumsy goading of the two trios came to seem itself a force of dispersal, an irritation even the nearer began to flee.

And then it seemed the two men abandoned the attempt to herd the rest of the school and began to make smoother progress outwards. They were already a hundred meters offshore, and she watched them make the next fifty as quickly as they had that first stage. As if in illustration of her thoughts about luck, a fair-sized cluster of delphs, uncoerced now, cohered, and stayed just ahead of the escapees.

Sarissa realized that for perhaps the last full minute, the men had been out in the zone of Polyphemus' unimpeded survey. Her head snapped round towards the colossus. The swarming globe was as before — though perhaps a shade farther out from its sector of the shore? She looked back to the trios, but even as she turned to do so, something about the lake surface between her two foci of concern disturbed her and brought her eyes back to itself.

There, some hundred and fifty meters straight off of her promontory, a narrow boil of movement scarred the waters — the surface track of a subaqueous motion whose rate was perhaps thirty knots. It was moving on a course that would intercept that of the delph school.

Sarissa stepped over to the gun whose emplacement commanded the coveward sector of the water, kicked up the muzzle for a long shot and trained it on the spot where the surface scar and the delph trios would impact. Touching the gun, which always calmed her, helped little — her heart was all hollowness and terror. The two men must have seen what was approaching them. The trios veered sharply about three seconds before it struck, and the water all around them sprouted Polyphemus' viperous cilia. Within another two seconds, she had already fired her first shot.

It was well over two hundred meters, at the very limit of the harpoon's effective striking power. Only her elevation made it even feasible. The line's silver arc sang out and down. She held her breath, as she always unconsciously did when she feared to disturb the plunge of a long shot that she already knew, as soon as it had left the cannon, was good. The medusa-tangle had already gripped the lead trio and propped the silver beasts upwards, like three bright tombstones against the sun, while other cilia worked for what was under them. It was the delicate,

discriminating motion of a man lifting a trapdoor to pluck something out from beneath it. The line's arc crumpled, shuddered through its two-hundred and twenty meter length as the spear impacted, transfixing the lead delph of the trio. With one hand Sarissa flicked on the automatic winch, and the line pulled straight — one puny machine engaging Polyphemus in a tug-of-war. Her other hand had already re-aimed the gun.

The second trio, while equally entangled, was not held so clear as the first. She fired and knew in the instant of doing it the shot was bad. She writhed through the seconds' wait before she could fire again. From under the trio she had hit, a struggling weave of cilia and human limbs fought its way round to the backs of the beasts. A snake-wrapped arm sought and seized the shaft of the harpoon.

"Yes!" Sarissa screamed. "That's it! Climb the line!" Her second shot dove short of its mark. The instant the cable had ceased to pay out, and cleared the feed-out spools, she fired again and, again knew she had it. A tremendous expectancy filled her. To beat this titanic enemy, rob it — never had she felt that the delicate geometry, the fleet calculus of her art, an art of parabolas and pin-sharp steel points, could achieve so much. Far away, a tiny Laocöon, the man wrestled half his body onto his trio's backs, having to fight the panicked heave of the beasts as well as the great leeches woven

round his frame. It was Jax. His shaven head, stripped of its respiration helmet, fought clear. Now he had the shaft by both hands.

Her third shot struck, and she geared the line taut. The speared trio came easily out of the cilia. She sickened, watched the field for what, an instant later, she saw: Helion, making the now-familiar storm-heaved progress through the field, whose acreage had now sprouted in a long swath leading back to the orb.

Sarissa howled with rage and concentrated furiously on the one she might save. Switching to her magazine of untethered harpoons, she began to pump them down upon the zone surrounding Jax, hoping to scythe down just enough cilia to give him a fighting chance.

And the armorer fought indeed against the giant — himself a giant of relentless will, his big muscles sharp-cut in the morning light with the strain. His struggle had tilted the trio toward him and he had worked his grip up to the harpoon line itself. Sarissa's shots rained around him, as close as she dared put them, and suddenly it seemed he had several fewer cilia round his chest. He surged up, working two handspans higher up the line — but the cilia had not withdrawn, merely shifted their grip to his shoulders. They bowed him backwards, folded him impossibly. Sarissa saw his hands let go before the sharp sound of his breaking back reached her. He collapsed back

into the meadow, like a wearied man throwing himself back on the grass for a rest. His trio was now also winched easily shorewards. The swath that bore Jax and, farther along, Helion, now began a swift contraction, without submerging. Round the island's shore the two were swept, while the huge orb rolled languorously and turned what she could not help but feel was a lusting gaze upon them as they drew near, the red rhomboidal pupil-mouth contracting and dilating in anticipation.

"When is she coming down?" Orson Waverly asked. "I need everyone's report. It just doesn't cohere yet. What's she doing?"

The other three traded looks.

"She's crying, Orson," Nemo Jones said. "Let her be, just a while yet. She thought for a minute she had saved them."

The biologist sighed. "All right. Let's rake through it again. Penny and Japhet agree they saw both squids and sharks excrete — eject large clouds of fine sediment, of considerable volume, that drifted down to the base of the orb. Meanwhile, early on, Nemo caught sight of some kind of large carcass, a cetaceanoid he thinks, being actively swallowed down, by minute movements, into the basal stratum. Cetaceanoids are bathic lake dwellers, and Polyphemus hasn't left the surface for the last two days. Conclusions: first, it is a giant detritivore; second, it's hunting and feeding from deep

down even as it sits here, my guess being that it hunts with structures similar to those it uses up here and probably engulfed the cetaceanoid last night. Fine. At this point, I see no way those things help us.

"Now to the packs. Very little that's new, essentially. Both Japhet and Penny now agree that when the squids fasten to their prey they show a shuddering movement that might be the reverse of peristaltic. But as to what they might be pumping into the bodies, you caught no clues. What would it *be*?" Waverly sounded petulant, exhorting his own imagination rather than the others. "Digestive fluids? Then what feeds the squids themselves if they just soften up the prey for Polyphemus — and if nourishment flows from it to them, how does it do so? And this about the sharks. You all three now say you saw them dive to the bottom even when their tethers had not been broken — saw more than one of them worming themselves belly-down against the basal stratum and then rejoining their packs above. Were they grazing on some of the detritus there? No one saw them using their jaws down there?"

All shook their heads and Nemo answered for them: "No."

"Shit! It's too much to cope with! Was there nothing else new, no change in the pattern of the packs' collective behavior, for instance? In the way each group acted together, or the way the two groups interacted?"

"Well..." All faces, including the blind one, turned towards Penny. "Look. This is nothing certain, but I had the *feeling*, at least, that the packs, both kinds, were concentrated a little more heavily at one side of the globe just before....just before Sarissa started firing." She had started weeping, though she struggled stubbornly against letting her voice break. Nemo laid a hand on her forearm and she clutched it. She let herself go then, cried in slow, quiet gasps, which Waverly didn't seem to notice. His mind had snagged on something.

"They concentrated on the side nearest the prey? Penny? On the side nearest the prey?"

"Yes. They ... always kept circulating ... circulating so much it was hard to say. But, yes. I think so."

Waverly nodded. His face had tightened. His teeth ground slightly, busily, behind his closed lips, a sign of thought in him. The faded blood tracks on his cheeks ceased to resemble tears, looked more like warpaint now.

"Japhet. Tell me again about the movement of the squids' tentacles — not while they were on the prey, but well before that."

"But what can I say that I haven't already—"

"Try this on. You've all reported that their tentacles show size differential — some quite short and fine, others thicker and considerably longer. All, you've more or less agreed, 'vibrated all the time.' But are you sure?

Absolutely? Did anyone notice, for instance, that sometimes it was the smaller, finer tentacles doing most of the vibrating, sometimes almost exclusively the larger ones, and only sometimes all of them together?"

Nemo's eyes immediately came up, to meet Japhet's. These were similarly kindled. Japhet said:

"Yes. That's precisely right. Nemo saw it too."

Waverly's back straightened, and his palms rested carefully on his thighs. "And the sharks. Someone on the log, Jax I think, said they were reddish-black, in three triangular clusters that tapered back to sharp points on the dorsum. And you, Japhet, said they reminded you of delph eyes. There are three clusters instead of two but what would you others—"

"Look," Nemo said. "Sarissa. She's seen something."

Even Waverly turned his futile gaze towards the knoll where the gunner stood. Her body was taut and she had here glasses trained on Polyphemus. She lowered them, raised them again. Then she let them drop to her chest, spun around, and rushed to her as-yet-unused gun, the one trained on Polyphemus' sector of the lake.

Sarissa sighed and wiped her eyes. She had cried this way once before, at the training camp on Cygnus IV. She had been just seventeen and had failed her first gunnery finals. Failed. She had

placed third in the class (of over a hundred) — not first. She had gone into the sand dunes fringing the lake where the finals were given each year and thrown herself down like a piece of trash discarded in the wasteland. Then she had mourned her shipwrecked pride and mourned two target floats, grazed but unpunctured, that had bobbed back up to mock her after she had fired on them. Now, two faces grieved her, and these would *not* bob back up from the water they had slipped into an hour and a half before. She faced Polyphemus and spat towards it, feeling hate enough to make her spittle caustic, to make her eyes spout laser beams. She saw what looked like a deep crease forming down in the muddy floor of the giant's interior.

She trained her glasses on it. It was not a stable feature of the stratum. It had not been there before, and now she could see it deepen, as if the whole layer were contorting for some unguessable effort. A few seconds more, and a shudder passed through the titan that made the crystalline walls through which she spied blur in the magnified field of her vision. The puckered place at once began to smooth out again.

Perplexed, she took the glasses from her eyes and it was then, viewing Polyphemus as a whole, that she saw a boil of motion to one side of the globe, halfway out amid the circumambient field of cilia. She brought up the glasses again.

As she focused on the turbulence,

its cause popped to the surface: a glassy, opaque ellipsoid, perhaps half the size of one of the fishing boats. One end was more tapered than the other, and at this end, two flagella, perhaps three meters long, were attached. With a slow, labored thrashing, they drove the organism out of the black meadow.

Once the thing had been a few moments in progress, it seemed that it hugged, preferentially, the shallows fringing the isle, for it began to make its way round towards a point just off the knoll Sarissa stood on. The perception and the reaction came in the same instant. She rushed to the nearer gun, swept its muzzle downwards, and waited. It was already within range, but she waited for the shot to become absolutely sure, waiting meanwhile for the slightest sign of divergence from its course as her signal to fire. She heard the others hailing her but spared no fraction of her attention for a response. This little piece of her enemy she could take from it, and she meant to do so.

It was within a hundred meters when she saw bubbles appearing around its flanks and realized that it had begun to sink even as it thrashed onward. She fired. The line hissed vindictively, the barb plunged to the little orb's center, fierce as a viper. The flagella continued to thrash, impotently but not, it seemed, particularly excitedly. She noted that the main part of the orb was tough only in its sheath and that its contents were gelatinous. So she set the winch going on the first

line and planted her second shot at the base of the flagella, where she reasoned a greater muscular rigidity should give her barb a firmer bite. Her aim was surreally true — she saw where the lance would lodge well before it did so, and almost set the winch on the line before it had even struck. She was already hauling her catch along the surface of the lake by the time the others reached her.

"Polyphemus ejected it — its basal stratum seamed up and squeezed it out somewhere on that side, just below the water level."

The winches had dragged it directly below them now and began to lift it from the water. The flagella, with a brainless mechanicity, did not cease to flail as the blubbery mass floundered up the rock wall. Out of the group's watchful silence, Nemo muttered:

"Polyphemus can see it — if it sees. Can hear it — if it hears. But it's not interfering."

"Polyphemus sees and hears," Orson Waverly said. "But it doesn't think. That thing isn't prey if it came out of the giant's body. And what isn't prey our greedy, mindless friend doesn't bother with."

The five people stood around the thing, watching its flagella's movement weakening gradually. Their knolltop group might have been a scene of ancient sacrifice. The things Waverly had called for when the organism had first been lashed to the rock promoted the

illusion. Japhet, Nemo, Penny and Sarissa all held flensing knives, and Japhet had used the little industrial lasers the boats carried to good effect on the plastic oars their emergency rafts contained. A large scoop, fork, and oversized pair of tongs had been fashioned, and a large sifting screen improvised from cable. The log was set up on a rock near the blunt prow of the sacrificial beast. The recorder's console might have been the abstracted face of the deity this druidic cult had gathered to appease: the Group Mind's memory-amplifier. Into this, the blindfolded priest meant to feed each scrap and nuance of the offering he could not see, hoping to purchase with this rite the greater insight that he and his fellow supplicants sorely needed.

The warm wind washed over the sacrifice, and the propulsive energy slowly metronomed out of its black stern-whips. Its smooth envelope had been faintly translucent, but now had grown waxier and begun to wrinkle. Out of the silence Sarissa said:

"I think it's weak enough to cut. Let's open it."

"Remember," said Waverly. "First the integument. If it has a distinct structure, flense me out sections and separate it as neatly as possible from what's under it."

At first, once their giant scalpels had been at work a few minutes, everyone was reporting that no clearly defined integument existed, but this proved an error. A distinct outermost

layer did exist, but it was more than two feet thick. It was a gelatino-fibrous material. Its fibrosity was attenuated at the outer levels, but the deeper into the stratum one went, the more sharply articulated, and more darkly pigmented these fiber-bundles became until, at the stratum's interface with the subincumbent tissues, it looked like a tightly packed surface of black-tentacled sea anemones. An embryonic Meadow of Medusa — all question of the thing's identity was settled here.

Within the *cavernum* lined with this dark pile of fibril-tips was a smooth, elongate capsule perhaps twice the size of a man. Its surface was of a thin, tough material of linked, hoop-shaped plates, so that the whole suggested a giant pupal case. The celebrants of the rite exhumed the whole upper surface of this sarcophagus shape. They worked with gusto, scattering the black, blubbery rugs of tissue about them on the sunlit stone, until the core of this biological torpedo lay upon a supporting remnant of the integument — lay on a crude-cut altar hewn from its own protective material.

Waverly, considering a moment, decided, "Cut in thirds, carefully and gradually, along seams in the plating. Be looking for clear structures, and also be checking with each other as you cut to see how far along the length of the thing those structures run. Then, when you've cut halfway down through it, open it lengthwise, along a lengthwise seam if you can find one."

His vatic crew raised their drenched blades and returned eagerly to work. Their concentration was complete. Their victim could have been as huge as its parent — their every move expressed an unconditional will to sift its secrets out of it. But revelation was quick to come. The pupal case proved thin, easily cut, and all reported that a dense, very delicately fibrous grey tissue underlay the sheath. It was macroscopically featureless, and after they had gone some thirty centimeters down, it began to look like the sheath's sole content. Then Sarissa's blade scraped on something hard.

Japhet and Penny joined her with knives. They scooped a hollow round the object, shaved it free from webs of tissue, pried it out. It was a human skull, which the tissue packed within as it had without, filling its orbits with grey, gelatinous pseudo-eyes. Sarissa held it up in the light of the noon sun. Her eyes stared into its jellied gaze, and her face worked as if she was struggling to read a message in its masklike expression. She said:

"It's ... fresh. There's still some cartilage in the ... nose hole."

Nemo came up behind her. He reached around, took it gently from her hand, gave it to Japhet, and gripped her shoulders. His hands strained, as if by the firmness of their grip he could throttle — as with a tourniquet — the grief and horror rising in her. Face blank, she let Nemo steer her to a seat on the rock. She watched the lake.

Waverly was deeply excited by the find and made them bring him to the site of discovery. His hands, tremulous and lustful as a gloating miser's, caressed the socket the skull had lain in, palped the surrounding tissue. A blind augur, he did a thorough divination from the alien entrails.

"Its deep inside a highly specialized structure. It didn't just wander in. Saw it open. Comb out the tissues packed inside it."

The skull had hardly been opened before something was found: thumb-sized white ovoids, nearly a score of them, embedded in the tissue. Penny helping him, Waverly cut one open, fingered its contents with exquisite thoroughness. "Listen," he said. "Improvise a large comb, fine-toothed as possible. Start with the fork we made while Japhet makes something finer. Anywhere in this tissue, whether it's encased in fragments of prey or not, look for anything that might be an egg — smaller than these, larger, I don't know — but probably on a similar scale and, hopefully, of a recognizably different form. Nemo and Penny on that. I'm going to open a few more of these. Sarissa, I want you to help me with knife and tweezers, but first help me rig a little table. Sarissa?"

Not speaking, she came up, touched him. The augurers went to work.

A bit later, they all sat together on the knoll. Waverly sat at his little bench, where he and Sarissa had unraveled the innards of three more of

the objects found in the skull. On the same bench were four black pellets, half the size of those from the skull, which Japhet had just combed from the tissue of the sarcophagus. He had cried, "Orson! I found some. They're black. They're a little like delph roe. Smaller, harder, separate, but shaped like roe." Waverly had straightened then. He had called them all around him, but once they had gathered, had sat quiet a long time.

They waited, the bright, bulky tatters of their butchery scattered all around them. Waverly's face came up, and he smiled slightly, as if with pleasure at the flood of sunlight that bathed him. His mouth groped for speech, but luxuriatingly, as if his mind were rummaging through a wealth of utterances.

"Delph eyes have the incredible motion-detective power of a jumping spider's, and we've recently confirmed to our satisfaction that their resolution of image and detail — of the very subtlest gestalts — that it probably surpasses our own. Polyphemus doesn't eat delphs."

This might have been the gloating introduction of a very hot paper read at an academy meeting. Waverly paused, visibly trying to sober himself. "I think the reason is that independent organisms, evolved more or less directly from the delphinid order, have become functioning saprophytes in the systems of Polyphemus' kind. These delphinids have first crack at their host's prey,

and they function as their host's eyes." He talked faster now, rushing to include his fellows in his new overview. "My guess is that the sharks' ancestors were engulfed by polyphemids as food, enjoyed some natural resistance to their digestive enzymes, and learned to thrive on their captors' meals. If polyphemids resembled the smaller littoral analogues I mentioned, they had only tactile sensibilities, with perhaps some primitive olfactory discrimination. Any one of them whose saprophytes could start cueing it to their visual recognitions of prey would surely eat better than its blind fellow hunters. And the saprophytes, evolutionally speaking, would feel a great stimulus to providing such cues.

"And I'm convinced the squids are similar in their history. Their tentacle activity is discriminative in just the way the cilia of our own organs of Corti are. When the smaller tentacles vibrate, higher frequency sounds are being registered; and when the larger, the lower frequencies, while all are usually in some kind of motion, as would be expected from the mixture of frequencies in most environmental noise. The squids are the giant's ears — grotesque though it sounds, I have no doubt of it. Both these captured species have evolved a caudal nerve-link with the giant's own major ganglia, which I am certain are in that basal stratum. The kelp is part of its own neural system, and perhaps respiratory and alimentary as well. If what's in this egg's

yolk is at all analogous, and I think it is, then the giant's basal stratum is a dense neural tangle, the plane of intersection for Polyphemus and its two breeds of saprophyte, as well as being its zone of absorption for nutrients. And when those sensory cooperatives breed, their reproductive packets are planted in that same stratum. The squids embed their eggs in the carrion before it is absorbed there. Quite possibly, they don't feed at all as adults and take in their life's nourishment during some kind of larval phase. The sharks go down and lay their eggs directly in the stratum. These genetic packages are then apparently well located to be included in that of the host itself, and the tidy partnership is perpetuated, while those that are not entrapped in the material of Polyphemus' spores no doubt hatch endosomatically to replenish the adult host's sensory packs. And as for the nutritive disproportionality between host and saprophytes, it's even less than I thought, for as the individual adult sensories die, they surely fall to the basal stratum and feed their master with their own corpses."

Waverly stopped, but with an air of cutting himself short. He sat, a small, canny smile on his face, as if challenging his friends to see what he did. Nemo said:

"Then if those sharks are still close enough to being delphs — if their eyes are built the same — our dyes could blind them."

Waverly cackled — it was the most

blatant hilarity that any of his fellows had heard from him. Then all five of them were talking at once. But when the first gusts of jubilation and (often fantastic) strategy had subsided, the biologist said:

"Listen. I think we can do it. And if it works, it's surely a start, a great satisfaction if nothing else. But it may not be enough. Because if blinding fails to drive it away, its auditory mechanism may be all it needs to kill us. I've got one or two specific suggestions to add to all you've said. Let's get down to the beach, finalize our plan, and get to work."

The second moon was half sunk below the crater's western rim before the island grew as dark as the waters encircling it. Until that time, a few hours before dawn, the island wore an unsteady constellation of lights, flaring and guttering stars: Japhet welding harpoon line into three-strand cables, Nemo and Sarissa working by a lantern, modifying rifle ammunition, Penny and Orson working together with the lasers to melt the tough hides of three freshly slaughtered delphs into a hundred meters of tubing, Orson scrolling the material and holding it for Penny to fuse with the bright, needle-fine beam.

Just after sunrise, the boat that Polyphemus had rejected once already set out from the island's shore. It was, as before, tethered to a rock, though even

more strongly than before. But this time it had passengers: two rather rigid figures with heads of stuffed cloth, painted features, and stuffed wet-suits for bodies. A system of wires, guyed to one of the boat engine's flywheels, imparted a jerky agitation to the lifeless shapes.

Polyphemus reached for the craft the moment it was offshore. As soon as the creature took hold, Japhet stepped up the winch paying out the cable, to facilitate the giant's speedy taking-in of the prey. A quarter of the island's circumference away, Polyphemus' mouth opened.

And when that red-rimmed trapezoid dilated, there came a series of twelve explosive barks. They sounded from the knoll Sarissa had been stationed on the day before. Their noise, eerily gradual, traveled out to cross and fill the lake's whole vast arena, and before the second had sounded, their effects began to appear: a series of twelve splashes in the lake of ichor bordered by the mouth's rim. Violently expanding clouds of yellow smoke began to bloom within the orb, some near its surface, others deeper down. The coalescence of these roiling masses had stained the contents of the entire globe within a minute and a half. Sarissa and Nemo, whose rifles had launched the missiles, stood with field glasses trained on Polyphemus.

The giant's overall movement had suffered a marked change. The steady, peristaltic surge of the cilia faltered —

the entangled boat ceased to flow so smoothly towards the orb. It paused, was joggled as by choppy seas. The fibers enmeshing it grew frenetically active, but somewhat less purposive.

"It's groping the boat," Penny shouted up to the two on the knoll. She stood on the beach, the nearest of them all to the captive bait. "It's not pulling it in nearly so fast!"

Nemo and Sarissa probed the thinning mists of dye for clues to the fate of the giant's eyes. The pigment was dispersing according to its normal behavior in lake and sea water, the bulk of it settling out in a harmless precipitate within three minutes of going into solution. The orb's inner jungle melted back into visibility. Sarissa said, thick-voiced as with desire:

"They're scrambling. Panicking."

"Yes. It's their normal patrolling motion, speeded up. Can you make out the eye color?"

"Yes! Red! Check that pack to the lower left." In both delphs and Polyphemus' visual sensories, the eyes' normal color was blackish-red in most light. And now the eyes on the "eyes" of Polyphemus flashed deep ruby as they boiled in their kinetically heated-up patrol movements. This was the color of dye-blinded delph-eyes, once the chemical had converted their chromatophore molecules to an isomer that the impingement of photons could not reconvert — that is, once the eyes' retinal substances had been permanently bleached.

"But they're not colliding," Sarissa said. The joy in her voice had diminished several degrees. "Getting snarled more often, but still co-ordinated. I think they can still hunt and kill...." Nemo knew that the foreboding in her tone related not to this part of their assault, but to a secondary phase of their plan that everyone hoped would not need implementation, but he pretended not to understand this.

"So what? They can't show it the way to its food, that's all we care about."

"The boat!" Penny called. "It's started bringing it in again!"

The action of the cilia, though different in quality, more searching and gradual, was smooth again. The craft wallowed and toppled onwards.

And it was, some moments later, consumed by the giant. There was no opening of it, no shaking out of the tasty nutmeat and discarding of the husk. The cilia brought it to the feeder-tentacles, which plucked it up, crushed it like a large shellfish, and hurled it whole into the mouth. As it sank, the sharks, clearly endowed with fine directional control and some form of sensitivity to mechanical vibration, swarmed on it. All took their turns, assaulting hungrily, retiring unsatisfied from the metallic morsel. The squids too took their futile turns, and at length the craft settled to the basal murk, with Japhet still paying out cable to allow its sinking.

The day's agenda was completed a

short while later, executed by five rather taut, silent people. A respirator, rigged to a float so that it rode some six feet under water, was set adrift from the cove. A hundred meters of improvised air hose linked it to the shore, where Nemo and Japhet worked a crude bellows of delph hide to produce continuous aspiration in the device. Polyphemus struck it with violent accuracy a short distance offshore.

Sarissa Wayne tilted the muzzle of the harpoon gun a little higher. This brought the grappling hook strapped to the underside of the harpoon up to her eye level. She reached out and touched one of its needle-sharp points, looked at the hook with distaste and unease.

"It's ludicrous," she said. "The more I think about it. How did we ever convince ourselves that it was rational? All of Orson's god-damned *inferences*...."

These words were addressed to no human shape, but to a grotesque manikin, half beast, half machine, that stood beside her on the flank of the knoll. The body was a squamous hulk, ensheathed in overlapping plates, shingles and greaves of a dark leathery substance. The head that crowned it was a metal-and-glass bulb with insectoid mechanical mouthparts, while on its back something like an engine was mounted on a shoulder frame. This Caliban replied in an eerie remnant of

a voice, filtered by the respirator mask:

"Don't start doubting it now, Sarissa — you won't function as effectively if you do."

"Horseshit! I'm getting you out of there if I have to spear you and fish you out. Function effectively! You think I'm going to let you down, Jones? All this shit about trusting me, everything you said to me in bed last night, all lies, right?"

Nemo knew she was not really concerned with his words, that essentially she needed to hold him again before he went down. He shook his head, shifted his feet wretchedly in their delph-skin boots, his queer expeditionary armor a torment bottling up his answering need to hold her.

"Dearest love. I'm going in, and I'm coming out."

"Coming out," she said quietly. "That's just it. You won't have any trouble getting in...."

They looked at the cable that belted the entire hummock they stood on. From a point just under their feet it dove in a shallow arc to Polyphemus' mouth-corner. Within the orb the cable dangled through the kelp. Down on the neural mulch their eyes could just pick out the wreck of their decoy boat. Sarissa stepped over to the second gun and checked its angle, speaking in a tone so carefully constrained it sounded absent. "If this thing wants to pull away, submerge, all our lines together won't hold it. If it's aroused

while you're ... *deafening* it — if it reacts, it will take you down."

"Listen, sweetness, if we let ourselves go over it all again, we only lose what time we have to talk about our love."

"Talk about our love!" She whirled on him. "Jones, you fool, with all your courtships and vows and declarations. I don't want to talk about our love, I want to *have* it."

Japhet Sparks called from the beach: "It's ready!" He and Orson had slipped their bait into the water. It was the engine of their most seriously damaged boat, mounted on a cut-down raft and anchored to the rock by a length of tripled cable. Sarissa went round the knolltop and called to Penny down in the cove. She sat in the helm of their escape craft — their one good boat, driven in the shallows around the island and hooked to a trailer raft for the two riders who would not fit inside.

"Penny! Bait's up! Here we go!"

"Hit it! I'm standing by!"

Nemo raised his gloved hand to Sarissa. She stood still and nodded, staring him straight in the eyes through his faceplate. Nemo took from the ground a large heavy hook with a handle-gripped bar attached. He eased down to the lower ledge cut for him to stand on, just under the cable where it began its plunge to the giant's mouth. He checked the weaponry in the side racks of his back-frame. The motor the frame supported was one of the small ones with

which each boat's emergency raft was supplied. Nemo switched it on briefly for a final assurance of its stability on its improvised mount, and switched it off. Then he hung the hook on the cable above his head and gripped the bar with both hands.

"OK, Sarissa."

She called down to Japhet: "Now!" The noisy little bait-raft fired on and chugged out towards the black meadow.

It was seized by the fibrils and tumbled orb-wards. Polyphemus' mouth began to open — and then the raft hit the limit of its tether. The cilia began to toil, frustrated, roused. The mouth, as if impatient, gaped fully open. Nemo jumped from the ledge.

As he dove, he felt metamorphosed into a kind of bomb. He wore two wet-suits, and to the outer one his delph-hide armor was sewn with steel wire. A padded, capsuled thing, his body was surreally snug and remote from the dreadful vision into which he plunged. The veined opacity of the orb's wall loomed into sharper sharper focus, and the teeming amber lake in the giant's lips rushed to him. Nemo brought his feet up and locked his knees. With the sense of exaggerated mass his gear gave him, it seemed to him when his heels impacted that he struck a titantic hammer blow on the bell of his own doom. The true proportionality of the matter was that he was like a sparrow touching down on the flank of a large hill. Even so, when he freed his hook and

hacked it for purchase into the orb wall, the suicidal blatancy of the act horrified him. The material was tough, pierceable only with fierce blows. He worked his way up from the mouth-corner along the giant's lip, a swollen, scalloped border of tissues shot with purple fibrosities. He gained his feet and began to stalk along the border of the golden tarn.

From his rack he took a crooked scythe welded from the blades of three flensing knives. He stuck its razor tip into the ichor and vigorously slashed up its surface. Sharks, as fast as rockets, rose and converged on the spot, mouths foremost. Nemo saw that their ragged fangs moved independently in addition to the jaws' movement of them — mouths that worked more like shredders than scissors. They milled there persistently, their red, poisoned eye-clusters flashing with their sharp, snakish turns. Nemo racked the scythe and took down one of his three rifles. He began to pump explosive shot into the haggard-toothed mouths. Outside the orb, at the fringe of its dome just behind where he stood, something huge moved. It was a trio of Polyphemus' feeder-tentacles, beginning to elongate yearningly outwards, towards the stubborn bait-raft. Nemo kept firing.

When he had killed perhaps a dozen, he found he was kindling un hoped-for havoc among these blinded sensories. Each one hit, as its head ruptured, went into spasms that snarled

the coordination of its pack. Each, as it thrashed, scribbled the ichor with ribbons and wraiths of its blood, waking the appetites of the squadron it jostled. The cannibal frenzy spread as the blood got thicker and made every beast smell like food to its fellows. It was, apparently, some visual cue that normally inhibited this kind of accident — the taste of cannibal food itself certainly did not.

Two other of Polyphemus' feeder tentacles had gone out towards its recalcitrant prey. So far none had reached it, but all showed a slow, inexorable extensibility that was not yet exhausted. Nemo scanned the red uproar beneath his feet. His goal was now the basal stratum, and he sought a window to it through the fanged turmoil. He saw one down along a major strand of the kelp, turned the ignition of the motor on his back, and dove in, rifle first.

They had seen Helion's still-masked face remain unaffected after his engulfment, while Jax's had soon begun to bloat and corrode, but, curiously, it was in his face that Nemo dreaded first feeling some caustic leakage, rather than his hands which, for his manipulation of his weapons, had been left fairly thinly gloved. The stalk he followed was a thick as his body, and he kept it just above his back, to force any attacker into a frontal approach.

Down where the stalks coalesced towards their common rootage, while there was still room to navigate be-

tween them, he branched off to his first task, where the wreck lay.

The hulk's cable had supported it against complete subsidence. It was sunk in a turgid half-liquid zone just above a more solid neural mulch. Its fractured hull offered many places where the coils of cable he had brought could be threaded through its chassis. Firmly and intricately, he wove the wreck to several major kelp stalks. Yesterday's bait had now set its hook in the prey that had swallowed it. Yesterday's bad luck — that Polyphemus should not flee in panic at its blinding, but feed regardless and wait to feed again — was today's good luck. "Take me down now if you want to," Nemo hissed in the smothered silence of his helmet.

Now came the task that probed luck's spider web. They had observed three distinct basal zones in which the sensories' neuro-umbilici attached. Now Nemo sped to the nearest of these and, trying to stay ahead of his fear, charged into it, scything through tethers in broad sweeps. He found a lateral branching of kelp to stand on and cut his motor.

As the squids came down, he shot them. They rained towards him with the erratic dodging movement of moths or snowflakes, and he shot them as they applied their caudal tips to the mulch to regenerate their tethers. The inner explosions tended to split them lengthwise, and several, in dying, vomited upwards from their beaks lit-

tle clouds of eggs like those found in the skull.

Nemo scythed the remaining tethers. Overhead, the silvery interface of ichor with open sky was visible in patches through the churned gore of the sharks, and Nemo saw it shattered by the impact of one of Sarissa's grappling hooks. The bait raft's tether must be near breaking. He worked faster, darting upwards from his ambush now to meet and kill those that were slow in descending. At least half of the tethers he cut must have been those of sharks, but few of these came down except in bleeding tatters, more mulch for the indiscriminating titan, which now dined upon its own senses.

And then Nemo was on to the second zone. Here he swept zigzag through the field and mowed it all at once. Panic was big in him, trying to split from within the shell of his self-command. His compromise was to push the very limit of recklessness. He stood in the center of the mown patch and fired directly overhead, accelerating his motor periodically against the muddy tug of Polyphemos' appetite at his feet. The sensories came dodging down through the veiny gloom, while from the smoky plane of the higher turmoil shark-meat drizzled ever more continually, trailing wisps of torn tissue. He saw Sarissa's second hook hit the interface and glide towards its purchase in the giant's mouth-corner.

The rent and ragged molluscoidal shapes piled in little drifts around him.

When the weapon's fifty-shot magazine gave out, he dropped it and snatched down another rifle. And then no others descended. He waited two seconds, five, then launched himself towards the third attachment zone.

In the same instant that he did so, the floor of his little ocean tore itself from under his feet. In the inertial shock that followed, Nemo sprawled helpless in the turbid boil. He collided with a stalk and hugged it, and then the giant was still. A moment later, the silver ceiling of this living cosmos exploded a third time. The bait-raft, its snapped cable fluttering behind it, dug an effervescent shaft down towards him. Nemo accelerated towards the last of the sensories' anchorages.

Those on shore saw him raise his scythe, dart forward — but then check his swing, and pull up just short of the umbilical thicket. There, at the edge of the webwork, the scaly little man-shape paused and, from his place in the orb's deepest murk, seemed to gauge how far the thicket towered over him.

"What's he doing?" Japhet called to Sarissa from the beach. She didn't take her eyes from Nemo, and her answer to Japhet was spoken only to herself, almost whispered:

"He's thinking how to kill them from higher up. Yes. Get near the exit before you do it — get near as you can!"

The scaly shape probed the kelp adjoining the thicket and separated out from it a slender side-stalk perhaps fif-

ty meters long. Nemo grasped this by the tip and began to drag it in a gradually rising spiral round the thicket's perimeter. He tightened the spiral as he rose, gathering the lower parts of the neural tethers into a sheaf. When the stalk ran out, he tied it to a more massive growth and found another, higher branching one.

Orson Waverly had extrapolated rather extensively from what the previous day's test had shown them: "I think it fell back immediately on a more primitive feeding taxon, probably geared for motile but armored or shelled prey. Maybe it feeds on some of the pseudo-brachiopoda — there's some big bathic ones just been found.

"But it's the implications of this behavior that are most significant to us. Totally blinded, and no panic reaction. I think these saprophytes, during their evolution, have maintained a very separable, interruptible kind of sensory feed-in with their host. After all, with tethers routinely broken, that kind of reaction wouldn't be very productive for Polyphemus. But, still, the complete deprivation of an important sensory input? My guess is that as long as the sensories are alive and maintain attachment, they transmit a steady flow of 'white noise,' random neural firings, to the host. It doesn't experience a disruption of sensation so much as a kind of zero-information state, such as it might experience on a dark night, or very deep down.

"I *am* convinced that as the senso-

ries are killed, Polyphemus will feel a cumulative encroachment of sensory deprivation — a state of 'total blank' as opposed to one of 'no news,' and it seems to me this *must* produce a violent reaction of some sort. Now understand that from this point I'm only guessing, but it's often the case that creatures as primitive as Polyphemus is, when you consider it apart from this startling adaptive turn it has taken — that such creatures can be relatively insensitive to extensive physical disruption. For my money, Nemo should have a good chance of killing at least a majority of the sensories before any radical sense of anomaly begins to dominate the giant's behavior.

Now Nemo repeated Orson's words in a snarl — "for my money" — and began firing on the sensories his ploy had aggregated into a desperate snarl no more than twenty-five meters from the titan's mouth. He was prodigal of shot, perforated the bloody, frantic mass from every angle. When his magazine emptied, he let the rifle drop and grabbed his last. After a moment — during which the redundant butchery had him in a kind of vengeful trance — he realized his work was done. It was then that the giant moved again.

It filled Nemo with awe, as Polyphemus' previous, lurching movement had not done, for this was an immense, concerted muscular effort of the bioscosmos that held him. The pressure of the ichor increased upon him as the en-

tire orb tautened and strained to pull itself offshore, out to deeper waters. The message of darkness had at last definitely reached the titan's murk-shrouded ganglia. The giant was alarmed.

And on finding that a quintuple thickness of cable opposed its withdrawal from shore, alarm became the plainest panic. Nemo, who had felt so huge and blatant during his soaring approach to the enemy, now felt he was reduced to a jot of foam in the raging prow of a tidal wave. His motor's effort mouthwards, skywards, seemed a ludicrous trivium. Polyphemus had a very powerful — awesome, even — capture-resistance taxon. It had sought to move and found that painful stasis opposed its murky will. It tried again, and a fang of pain on a scale that it could feel was sunk into its core. And now Polyphemus was an earthquake. Volcanic clouds of its black blood roiled up from the roots of the stalks that its panic was tearing loose. Pain could not vie with the blind will to escape that it had kindled in this colossus — unmolested, no doubt, through centuries of easy gluttony. Polyphemus strove, and an ink storm arose from its tearing entrails.

And when they tore free and the boat, trailing broken trees of nerve chord, came vomiting, rocketing mouthward, Nemo knew he would be trapped in the ichor's inertia — would fall with Polyphemus and join him in his dark retreat, if he failed to reach the

boat before it erupted free. He gave up vertical striving and fought to intercept it.

As it erupted he saw he was missing it, was a helpless half-second too slow, but mindlessly he sustained his drive after the craft had passed him. A trailing nerve stalk clubbed his belly, and he hugged it with both arms and legs, while all the fluid volume of Polyphemus strove to strip him off and flush him down. The boat, the stalk, and then Nemo, were into the sky.

The sudden surge into freefall tricked Nemo out of his grip on the stalks. He could see he was falling free of the sinking feeder-tentacles, but that he was going to dive into the cilium-field sluggishly following the giant's subsidence. He fought to straighten for a sharp, hands-first entry so that he could pull the dive shallow as soon as he struck. He hit the vipped foam and arched his back strongly as he entered. As he surfaced he felt himself pulled short. A fibril had snarled in the screw of his motor.

The field was retiring laterally before it sank under — Polyphemus was pulling its skirts, so to speak, off of the midshallows they had overlain. Nemo threw his fietet in the air to flop backwards where he could get a grip on the cilium. He just managed this, but was too awkwardly folded, legs flailing, to get a scythe free from his snarled rack. A red shock of pain ruptured his left foot.

An instant passed before he had the

wit to seize hold of his foot and grab the line of the harpoon that pierced it. He wrapped it round his arm, feeling nothing so much as a vivid embarrassment and indignity in his position as he fought for his scythe with his free hand. He had been dragged past the littoral drop-off before he had it out and went under.

For a brief eternity he expected Polypheumus' full weight to haul against his steel-wound arm, and then he got the scythe tip under the fibril and pulled mightily.

Jones lay on the beach the expedition had first set out from. Japhet had brought the medical kit from the sandhog and waited at a discreet distance while Sarissa cleaned and bandaged Nemo's foot. She finished the bandage and patted his thigh, smiling absently with an unconscious appraisal and satisfaction in her eyes, such a gaze as a breeder might bend upon his prize beast, knowing it safe after some hazard.

"No artery hit," she said, "a few of the metacarpals broken, I think. At the worst, you'll have a slight limp and that

won't make you any the less active."

Nemo nodded gravely and didn't answer at once. "I love you all the more for your ... determination to save me," he said at last. "No doubt you had an agonizing moment there as you fired, dreading that the shot might be ... a little off."

"Not the slightest." She said it fiercely. Her large black eyes came up and bulls-eyed his; a distinct frost of impugned expertise gave them added bite. "I knew it before I even saw exactly what kind of fix you would get into: there was no way I was going to miss you, Jones."

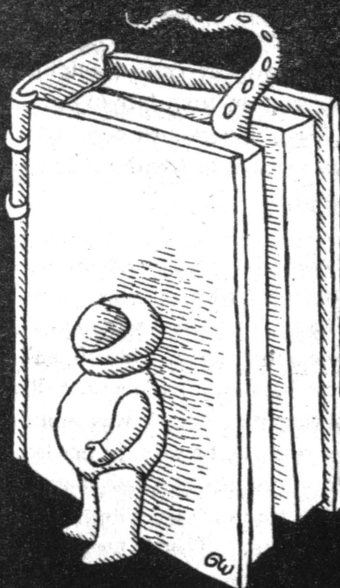
Nemo nodded. "I see." He looked at the lake and smiled.

Down in its waters, their enemy still pursued its ponderous retreat. Deep in the lake's root, the cold and lightless magmatic shaft, it sought the realms that were the ancient nursery of its evolution. Its encounter with the vertebrate bipeds had reft it of the fruits of five million years' development. It had found the butcher-work of these midgits far cannier than its own, and so it stumbled back down to the night of its origin.



Books

ALGIS
BUDRYS



Drawing by Gahan Wilson

Dream Makers, Charles Platt; Berkley, \$2.75.

Valis, Philip K. Dick; Bantam, \$2.25

The World and Thorinn, Damon Knight; Berkley, \$12.95.

The Cool War, Frederik Pohl; Del Rey, \$10.95.

Worlds, Joe Haldeman; Viking, \$12.95.

The Human Zero: The Science Fiction Stories Of Erle Stanley Gardner, edited by Martin H. Greenberg and Charles G. Waugh. Morrow, \$12.95.

In *Dream Makers*, Charles Platt has done an unusual and possibly useful thing. The book is a collection of interviews with SF writers. Almost all were done in person by Platt. There are 29 pieces in all, with photo-portraits included, plus an introduction and appendix. Twenty-nine writers are covered, with an additional "self-interview" of Platt. One of those sketches combines coverage — mail, in this case — of Damon Knight and Kate Wilhelm. As a result of her marriage to Knight, Kate thus has the distinction of being the only woman in the book, just as Cyril Kornbluth has the distinction of being the only dead writer in it, and the only writer represented by his wife's recollections of him.

Otherwise, all the people here are live men. It's quite a cast — Asimov, Disch, Shekley (who gets his name mis-spelled on the cover), Vonnegut, Hank Stine, Spinrad, Pohl, Delany, Malzberg.... You get the idea. The order is not alphabetical, it's geographi-

cal, more or less, tracing Platt's peregrinations across the U.S.A. and England. He interviewed only people whose writing he liked. He has already said, in response to the obvious question, and with a nearly visible shrug, that apparently he doesn't care much for the writing of females. Fine. Now let us have a companion volume from someone who feels the opposite way.

The more the merrier, because I find myself fascinated by the whole thing, and I suspect you will, too.

Mind you, there's no good reason on the face of it why anyone should give a rap what sort of town Phil Farmer lives in, or what Alfie Bester looks like — like an aging faun with a lively memory — or how many fast food joints one passes while driving east on Dempster Street to the (large, comfortable, shadowy and hot) home of (ahem) Your Humble Servant. Nor are these interviews intensely or comprehensively biographical in most cases. They're glorified diary entries; on this particular occasion, Charles Platt stopped by Harlan Ellison's and this is what was on the walls, this is what Ellison wanted to talk about this day; next day, up to Ray Bradbury's. Gossip, for the most part. Oh, a few impassioned declarations here and there, a few thumbnail *curricula vitae*, a few brushes with Freudian or Jungian analysis.

And yet.... And yet, a picture emerges. Mostly, Platt has made lists of objects and words spoken in dia-

logue. But I found myself extracting all sorts of clues and conclusions from this apparent objective material. And then I raked through it again. More. I wanted more. I wanted very much to know these people.

Why? Well, to a certain extent because it helps me to know how van Vogt approaches the whole gestalt of writing, what might be going through the mind of E.C. Tubb to find someone from the critical establishment paying attention to him at last, what J.G. Ballard says when someone talks to him about books written a score of years ago. But the main reaction was What a zoo we are! How various, how beautiful, and What immortal hand or eye?

This is not the reaction one gets from encyclopedia entries, who's whoses, carefully crafted autobiographies, or even from face-to-face contact. Face to face, we don't say the things we said to Charles Platt's tape recorder.

Philip K. Dick, for instance. The chapter on Dick is a wow. It wasn't acid he was on while writing *The Three Stigmata of Palmer Eldritch* and all those other loopy 1960s novels. It was amphetamines, and it was amphetamines because, he says, he needed the speed to produce at a rate that would keep up with his then-wife's ability to spend money. (This is fascinating to me because in every other case I've ever heard of, speed slows; it produces logorrhea, all right, but it produces

over-meticulousness, too). After a while — after that slew of books, and in the last increments of that failing marriage — a peculiar light suffused Dick's world, and a voice began to speak in his mind.

It began by diagnosing a hidden, potentially fatal congenital defect in his child. It instructed him to fire his literary agent, showed him the moves that enabled him to collect a slew of overdue royalties, and changed his drinking habits. It systematically re-ordered his world, and his view of the world. At about this time — I'm not sure of the exact chronology — his cat and dog died of multiple tumors, possibly induced by radiation from the light, but were making attempts to communicate with him before they died. And then the voice began telling Dick about the avatars of the Savior and the nature of reality. For example, much of the Christian Era is false time, inserted into the world by malefic forces. We are actually only a comparative handful of years past the birth of Christ, and there is nowhere near as much physical distance as we think between the Mediterranean area and California.

I was saying these were not things we might say face-to-face. But actually Dick has put all this into a novel — *Valis*, his first novel in four years, a Bantam paperback original. He's not sure what the voice was. It might have been God. It might have been a Vast Active Living Intelligence System. It's

gone now as an everyday companion, but the effects of its visit linger, and *Valis* is the semifictionalized account of its doings.

Taken as a novel, it has its drawbacks. Philip K. Dick is in it as a character. As a character, he has the delusion that he has an acquaintance named Horselover Fat, to whom most of the adventures happen. Actually, Fat is Dick. (As he points out, "Philip" is derived from the Greek word for "horse-lover," and "dick" is German for "fat.") Dick and Fat eventually merge, briefly, and sanity returns to their lives, but that doesn't last. A new Savior is born, probably, as a girl child. But that doesn't last. A number of other purely arbitrary things happen, and seem to have no storytelling purpose.

As a tract, it's a whizbang. The purpose of the book appears to be to convey a series of epigrams on the nature of reality. It concludes with an appendix repeating the epigrams. These are just sufficiently convoluted and confabulatory to make excellent material for a new, if short, Holy Book. They are absolutely choc-a-bloc with all the enigma required to support a worldwide, millennia-long prophetic religion replete with exegetic enterprises and rife for multiple schism. It's a sure bet Dick has founded a mystic cult with this effort. If it turns out to be an enduring and universal one, won't L. Ron Hubbard be jealous!

Damon Knight has produced his

first novel in sixteen years. And it's by far his best. It's a terrific reading experience, and for lagniappe it's a primer on how to depict the wondrous. *The World and Thorinn* is, flat out, a book for your basic library of SF.

The Earth, many, many years in the future, has been enclosed in an energy-conserving shell and fired off to the stars, in flight from the unstable Sun. The engineers who did this, gutting its core for the required metal, are long forgotten. While many people live on the surface, under the shell they believe to be the sky, many others live in the caverns below. They are culturally fragmented. By genetic drift, and perhaps by bio-engineering, they differ in form from each other in ways extreme or slight.

Young Thorinn, a changeling raised by a rather Norse family on the surface, is persecuted by his brothers and his father — or, rather, by the people who have assumed those roles. Finally, they get rid of him by sending him down into a dry well and putting a stone on top. But the bottom of the well yields to digging, and Thorinn breaks through into the linked endless series of caverns. Wandering, often in peril, sometimes befriended, sometimes a bringer of good but sometimes an inadvertent plague on those who take him in, he finally attains manhood and his birthright.

It's one more in SF's endless series of displaced wish-fulfillment sagas, right? Well, yes; it abounds with classi-

cal elements that are in constant use these days, and frankly I had gotten terminally sick of them. I hated this book as soon as I glimpsed the synopsis pasted to the advance review copy. But what reading it has taught me is that what I really hated was the shallowness of the sort of thinking and talent normally devoted to this sort of book. I still hate this sort of book. But I love *The World and Thorinn*.

I have been telling people for years that Knight was one of SF's born short story writers, which is true. I have also been telling them that he was one of those writers who become less good in direct proportion to the length of the work they attempt. That is now not true; not at all. Sixteen years is a long time for me to have been wrong. I apologize to all concerned.

Frederik Pohl has for some reason been moved to write an international intrigue novel, and I like it fine. Spy adventures are one of my secret vices, as they are for a number of SF people. *The Cool War*, set in the very *real-political* energy-poor world of 2020 AD, does an excellent job of transferring the appeal of the two genres into each other.

Now mind you, that's what this is — a frank genre spy novel, as distinguished from for example *The Honorary Consul*, and a frank genre SF novel as distinguished from for example *Jem*. I am blessed if I can accurately tell you on what basis I draw those distinc-

tions; it has something to do with perceived intent by the author, which means it has something to do with a critic attempting to read a creator's mind. Not a fully defensible exercise, but then no instinctive reaction has a totally rational basis. At any rate, what we have here is a spy novel which is both shallower and rather more easily read and enjoyed than recent Graham Green, and an SF setting which roughly parallels the Earth from which Pohl launched his expeditions to Jem, but an SF tale which is not as hampered by any attempt to underscore its ecological message.

It's the half-whimsical tale of the Reverend Hornswell "Horney" Hake, head of a little flock that makes Unitarianism seem a step to the right of Hard-Shell Baptism, who for one reason and another gets recruited into the cool war. The cool war is an undercover international pastime; They infest our avocado farms with insects, We lay a mutated malaise on Them that loses them thousands of man-hours in their factories. It's cheaper than war, cheaper than the arms race. And in a world of finite resources, it's deadlier.

As Horney Hake falls unwittingly into this game of beggar-thy-neighbor, traveling around the world on credit cards stolen from Them and thus encouraged to be a wastrel, he quickly finds himself enveloped in conspiracies-within-conspiracies. No one and nothing is/are what (s)he(it) seems.

Something of the same sort is true

of the narrative. Offhand, you would assume Hake to be the focus of an absurdist farce. But just when you feel you're definitely being sent up, something deadly serious happens. Then, at about the point where you've irrevocably decided that the whole thing is meant to be taken with some sobriety, Pohl imperturbably slips in a mickey. This could be a very two-headed book. But it's not. Pohl is deft enough to maintain what is in truth a devilishly difficult balance to sustain. I think perhaps this book resembles the Knight in this respect; what would have been a rancid custard in a less accomplished writer is here a small *chef d'oeuvre*.

Paralleling Pohl's book is Joe Haldeman's *Worlds*, which is not funny at all but is set in the very foreseeable future. Earth is poor, the orbital colonies are not quite rich but definitely in a far better position to obtain resources, revolution is brewing, and the ultimate results might be cataclysmic. Twenty-second century, says Haldeman. I'm not so sure, bearing in mind there were only fifty years between the War of 1812 and the Civil War.

In its beginnings, *Worlds* tends to remind one of *The Moon is a Harsh Mistress*, which is in many ways the best book Robert A. Heinlein ever wrote. So one braces a little to see Haldeman suffer by comparison. Haldeman is the heir apparent to later Pohl and middle Heinlein as the author of straightforward tales straitly told,

but his peak hasn't arrived yet.

However, *Worlds* shifts away from this confrontation, concerning itself far more with events on Earth as seen through the eyes of what I think is a rather well-realized female protagonist. I'm not sure I like her that much as a person; she seems to be extending her childhood rather far into her lifetime. But she is a person, and that's harder for a male writer to do than it is for a female to turn the opposite trick.*

In its movements across the face of a western world fragmented by 21st-century political and cultural events, the novel in fact depicts an even greater variety of worlds than exist in the space clusters. But certain human constants prevail, and what they result in is not at all pretty. Haldeman does not do a perfect job of this — begging all the award committees' pardon, he has yet to do a perfect job of any book — but there is a more-than-sufficient sense of the human condition in the job he does do. And as he says himself in *Worlds*, the human condition is not fully knowable.

What I brought away mostly from *Worlds* was a sense of contact with literacy and, of all rare things, mercy. This seemed a very warm thing to have encountered.

I remember when I was a lad, certain wise men of the SF tribe would ev-

**Because no one, male or female, has that much experience of seeing realistically depicted females in fiction.*

ery so often polish-up the worth of our field by noting that even Erle Stanley Gardner had written some. This did not seem like such a big whoop-te-do to me, and I never made much effort to go look it up, even assuming it was still extant. In later years, pursuing something of an interest in 1930s American crime fiction, I ran across some early Gardner 'tec fiction from *Black Mask* magazine,* and this work tended to confirm my feeling that one could endure a lifetime without looking further into the matter. Come to that, except for an inexplicable spell of some six months in which I read straight through a two-foot-thick bundle of Perry Mason paperbacks, I also felt able to cope without the more expert Gardner of later years, though I admired his craftsmanship.

But Karma advances. I would not recommend it for the simple pleasure of being read as the author's intended fiction, yet *The Human Zero* is very possibly a book you might be glad to have read.

The indefatigable and ingenious Martin H. Greenberg, once again in partnership with the conscientious and well-spoken Charles G. Waugh, has come up with another of his blockbuster ideas for a collection. These are seven Gardner SF novelettes from *Argosy*

**Did you know, by the way, that Black Mask was founded by H.L. Mencken, who then went on to do The American Mercury, whence Mercury Press, thence F&SF? Tickles you some, doesn't it.*

magazine of the late 1920s, and they are doubtless best read as curiosas, but they're striking curiosas.

Think about it. Here is what *Argosy* readers were getting for SF at the same time Hugo Gernsback was just converting his scientifiction to science fiction. These stories are the work of a tyro wordsmith — Gardner, born in the late nineteenth century, didn't begin writing fiction until his thirties — done in competition with Murray Leinster, Nelson Bond, and other *Argosy* stalwarts. If there had never been a Gernsback, or an *Amazing Stories*, still there could have been a viable corpus of American commercial pulp fiction writers to create a field which might have been called almost anything but "science fiction," but which in some perspective from a parallel world might be very much — very much — like what we have today. Vaguely connected to Poe, Hawthorne, and Jack London, housing the juveniles of Carl H. Claudy and "Roy Rockwood," bellwethered perhaps by *Weird Tales* (which pre-dated *Amazing*, and eventually housed Ray Bradbury and Theodore Sturgeon as well as Lovecraft and Bloch and Kuttner and Moore and more on many a dark and stormy night), possibly culminating in a *Magazine of Fantasy and (?)* ... oh, think of it!

Well, all right, don't, if it makes your head spin. But what we have here are seven stories ranging from the reasonably competent to the dreadful,

and they're fascinating, every one. For a variety of reasons. One, they house an overwhelmingly broad farrago of the most amazing racial, sexual and ethnic prejudices. These are so striking that it takes a moment or two to regard them calmly for what they are — perfect reflections of the way just about everybody was writing pulp fiction fifty years ago; accurate signposts on the various roads we of the popular fiction audience have come from that benighted condition.

Two, several of them sweep the reader into the narrative and do not let go until good and ready. It requires shutting down any portion of your brain that actually knows some real science, but once that is done such stories as "A Year in a Day" take on a certain magnetism. The title story is almost as successful in that respect.

Three, it is fascinating to watch a person you know is going to become a household word and a multimillionaire struggle to isolate that thing which readers will beg to pay for. Surely Gardner knew he was totally unequipped to write science; surely he knew that by the standards of many of his contemporaries he couldn't write his way out of a damp paper bag; but just as surely he believed in the Great Truth of pulp writing — that it isn't prose skill or depth of research that makes monarchs in the literary marketplace. Nothing — none — of what they attempt to teach us in Composition classes or Literature courses is essential to

what makes a storyteller. In fact, because nearly all the vocabulary invented for describing literature was invented by critics, not by the Erle Stanley Gardners, it's not even possible to discuss clearly what it is a writer like Gardner does. But it has something to do with preserving a certain naivete about the manner of one's shrewdness, and with communicating to the similar child in all of us.

Speaking of childhood: University Microfilms International, that excellent service of 300 N. Zeeb Road, Ann Arbor, MI 48106 USA and 18 Bedford Row, London WC 1R 4EJ, England, will provide you with facsimiles of *As-tounding Science Fiction* from 1931 onward, at a reasonable price for such a

service,* so that you can scan the Golden Age and even the tottering beginnings of U.S. newsstand SF. But it does not have a file on *Unknown* and *Unknown Worlds*, that fabulous precursor of this publication here. However, if enough people write to them, expressing a genuine interest in purchasing copies, they will attempt to obtain permission to meet the demand. Any two years of ASF cost \$53.60 U.S. That's a fair price, especially considering what actual issues cost in the collectors' market and how fragile they are. One assumes the price for *Unknowns* would be similar. It sure beats making a deal with the Devil.

**They will also, of course, provide copies of many other publications, including this one.*

Coming Soon

Next month: **MYTHAGO WOOD**, a gripping and unusual fantasy novella by Rob Holdstock.

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Please use the coupon on page 136 to be sure of receiving the anniversary issue.



Gahan
Wilson

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Tom Easton ("Gambling Man," August 1980) returns with a new story about Howie and the mayor and what they find during a strangely sparse deer season in the Maine woods.

Alas, Poor Yorick

BY

THOMAS A. EASTON

The world is full of ghosts, of myths and legends and boogeymen. Most are mere stories, vaporings of idle minds, but some are real. Real enough to touch and talk to.

We found one of them last fall. We tracked it down, brought it home, and domesticated it. We gave it a name and a home and a place in the community. We even put it on welfare, and none of the folks in our town thought we were coddling it. Ghosts must be laid, after all, even at the price of a little public funding.

The trouble is that ghosts don't stay laid. This one was no exception. It came back to life as soon as Mike Gibbons showed up again. He's a Boston anthropologist who comes down here every spring for the fishing. He had thick black hair once, though he's losing it now. Enough of it's gone so he has to wear either sunburn lotion or a

hat on his head, and the rest is well on its way to white. His face is so cracked and crannied that it might be a map of the Near Eastern countries he does his work in. His body, naturally enough, is that of an aging ditch-digger, a layer of fat over plenty of muscle, thick in the middle, burly arms and legs. He's tall, too, half a head over me.

I suppose Mike must wear a suit in Boston, when he's teaching or having tea with the university president, but I've never seen him in anything but suntans. Working clothes. Fishing clothes. He was wearing them when he came by my office the other day. When Louise showed him in, her voice held a paradoxical tone, as if she were simultaneously sniffing at his inelegance and fawning over his title. "Professor Gibbons," she said, holding the door for him. "He would like a few minutes, Mayor."

She'd have made anyone else wait, suntans or suit. But she knew I wasn't busy, no appointments, not much paperwork, and a *Professor* should never have to cool his heels. That was Louise. A snob, who thought she could surely run the town better than me. At times, I wished she were right. She would certainly be more decorative in the job.

I waved him to a seat, asked him what was up, and picked up my pipe. It had gone out, so I relit it. As the smoke billowed over my desk, Mike said, "I've been fishing the river, Harry. Up by the new bridge. Above the falls. And I saw something strange."

I could guess what he'd seen. The new bridge — new in '79, that is — carried the Doak Road over the river, and just up the road.... But I pushed the buzzer, and when Louise stuck her head in the door, I said, "Coffee, please. We'll be a little while." Then I let him go on.

"Fellow on a rock, with a spear. He was getting fish, too. I envied him." Hunched in the chair, he shook his head. His mouth had a rueful twist, and I thought him still impressed by the memory. Though not necessarily by the fisherman's skill. He could do as well, I knew.

"They're good at that," I said.

"All of them? I followed him home when he was done. Tried to speak to him, but he didn't seem to understand a word. Though he didn't object to me tagging along."

"Led you to the farm, did he?"

Mike nodded. "Rundown place, isn't it? No animals except a dog or two. No crops. And two dozen adults and children running around half-naked."

"Ayuh. You meet Ngkurkha?"

"The one who speaks English?" He leaned forward in his seat and nodded again. "So that's his name. He sent me to you when I started asking questions. And I should have known you were involved."

"That's what we told him to do when we gave 'em the farm. Gives me a chance to block publicity."

His lean steepened. He braced his palms on his knees. His face wrinkled as he almost glared at me. "You mean you're trying to keep this secret? They should be on a reservation somewhere! Where they can be studied. Protected! Not parked on a farm out in the boon-docks to rot."

I waved my pipe at him, but before I could speak, the door opened. Louise brought two mugs in. She looked like she wanted to stay and listen, but I shoosed her out and found the sugar and imitation cream in one of my desk drawers. Then I said, "Take it easy, Mike. That's not our way here, and you know it. The farm gives them shelter, the woods and river give them the food they're used to, the way they like it, the warden won't bother 'em, and we see to it they get some extra food. Get a doctor out to 'em, too, once in a while."

"But, but...."

"And they don't need any other kind of protection as long as no one knows they're there."

"But the future! You can't just park them on a preserve forever!"

"Don't intend to. We're giving them a hand until they learn the language and the ways. Then they should fit right in. Already, we've got dockworkers over to Searsport no prettier."

He was quiet for a moment. He settled back in his seat and took a swallow of coffee. He stared out the window. Then he said, "It makes sense, I guess, though some folks think assimilation is a dirty word. But it's such a waste. If you keep them secret, no one will ever know what they're like. No one will ever be able to study them."

That had never been our intention. All we wanted was to give them a chance to adapt at their own pace, unpressured. I told him so, studying him as I spoke. I had known Mike for years, and I trusted him as much as I did any man. And I knew from watching him in the woods and around town that he was a sympathetic observer, unobtrusive despite his bulk, friendly, and willing to pitch in where extra hands were needed. Finally, I added, "Why don't you do the studying? Since you know the secret anyway."

His face lit up. The wrinkles smoothed away and the eyes glowed. I might have offered a historian a time machine. He said, "Students, too?" A practical historian.

"Sure," I said. "But do keep it under your hat for a year or two. Give 'em a chance to settle in."

He nodded his agreement. "Seems fair. But you'll have to tell me...."

"How they got here? Of course. How about tonight? Care to join Bonny and me for supper?"

Bonny was my wife. My second wife. She had been my secretary before the divorce and for a few years after, but she'd quit after the wedding. I'd regretted that ever since. For one thing, it had let Louise in. For another, I could no longer watch my Bonny all day, and that had always been a pleasure. I missed her intelligence and competence as well.

We lived in an old white farmhouse a little outside of town. The apple trees out back were covered in blossoms now, and the daffodils were up. Eight cords of logs, next winter's heat, were piled in the driveway, the lawn mower, an old push-pull reel number, parked beside them. Mike's junior pickup was already there when I got home, pulled to one side to give me room to get into the garage.

He met me at the walk, and we went in the kitchen door together. We found Bonny at the counter, slicing carrots, looking domestic in a little apron of yellow toweling. As she turned to greet us, I stroked her dark hair and collected a kiss. Mike stared. "Pretty as ever," he said as she held out

a hand. "You should have come to Boston instead of here. Then I'd have had a chance."

She grinned and said, "It's good to see you again, Mike. Blarney and all. What are you feeding the kids these days?"

"Same old stuff. Though it looks like that could change now."

"He's found the farm," I said as he flicked his eyes around the room, looking for a chair. There were three by the table, on the other side of the wood stove. I pointed one out to him. "Want a drink?"

When he nodded, I fetched the bottles from the cupboard and got glasses and ice. Bonny said, "He would," and turned back to her carrots. "Just wine for me."

"Ayuh." I poured, scotch for Mike and me. "I told him he could study them as long as he kept his mouth shut."

"And he agreed?" She paused, thinking. "Though it'll take awhile to do the studying, won't it?"

"At least a year," Mike answered her. "Probably more. And I *don't* want a lot of competition here." He took the glass I handed him and sipped. He raised it to me with a glance of appreciation. It was a fair single-malt, smokier and more mellow than any blend could be. "I'll be quiet at least until I'm ready to publish. Maybe longer if they still aren't ready for the exposure."

"Good man," I said.

"He just wants to stay on our good

side." Bonny smiled as she made the accusation. "If he doesn't mess it up, it'll do his reputation more good than the Hittites ever did."

Mike nodded and grinned. She was right, after all. "Though Harry did promise to tell me how he found them."

"After supper," I said.

Once we'd eaten, suffering through the need to talk about anything but the farm and its occupants, about the fishing, the weather, being an unpaid small-town mayor, digging for history, university politics, and all the rest, we took our coffee into the living room. Once we were settled in comfortably and I had a low fire built in the grate, I started to talk. Mike never interrupted, though after a few minutes he did fish a notebook out of his hip pocket and begin taking notes with a worn stub of a pencil.

For years, I began, Waldo County has enjoyed the reputation of a good place to hunt for deer. Every fall, the kill is among the biggest in the state. But, last year and the year before, the kill was off. No one had a guess on the why of it, either. The previous winter hadn't been particularly bad, the coyotes hadn't come this far south and east in any numbers, and the kills hadn't been any greater than usual in the years before. The deer just weren't there — at least, they weren't being fetched to the tagging stations.

Not that the hunters gave up. Every

one of them believed the deer were there and that his (or, a very small sometimes, her) luck or skill would find them. Howie Wyman and I were no exceptions.

Howie's an old friend of mine, as Mike knew well enough. He'd shown Mike more than one place to find trout, and Mike liked the man, for all his scruffiness. Howie habitually wore battered work boots, dirty overalls, a checked flannel shirt, and a floppy green felt hat. When he went hunting, he made one concession to the game laws by replacing the hat with a fluorescent — "hunter" — orange cap. He added a coat, too, depending on the weather, but that was just as disreputable as the rest of his outfit, a faded khaki parka, filled with down and covered with pockets. He looked like he knew his way around the woods, and he did. After all, he spent every minute he could spare fishing and hunting, escaping from his nagging wife and her need for money. He even had a guide's license, though money generally meant odd jobs for him.

It was nearly the end of the season, Thanksgiving two days away, and neither of us had so much as seen a deer. There hadn't even been much sign. For that reason, we welcomed the thin snow that had fallen the night before, and we headed for a spot Howie knew. "It's well off the roads," he told me. "Good hour's hike 'round Frye Mountain. But the deer are always there."

I hoped he was right, but through-

out our hike we saw only two tracks, and they were half full of snow. Night tracks, and not fresh. Even rabbit sign was scarce.

We hunted for hours. We stood still, waiting and listening, hoping a deer would break the silence. We stalked the slopes of the mountain, stumbling over rocks and clefts, disturbing the powdery snow, hoping to spook a buck into its leaping run. But we found nothing. Few tracks, no snorts in the brush, no puffs of steam, no flags, even in the distance. The deer just weren't there.

Toward the end, as the overcast sky darkened with the fall sunset, we rested on an outcropping of the mountain's granite. We brushed the snow away, set our butts on rock, and sighed. I lit my pipe. Howie wadded a chaw of tobacco into his cheek. Neither of us said a word. We didn't need to.

Idly, Howie kicked at a rock on the ground before us. It rolled, oddly light, shed its mantle of snow, and grinned at us.

"By time!" swore Howie. "Somebody caught it, sure!"

"Ayuh," I said. I leaned my rifle on our rock and bent to pick the skull up. "Shot, too." I pointed to the small hole below one cheekbone and the larger one in the opposite temple.

"Not lately, though." He was right. The skull, nearly as bleached as an anatomist's prop, bore numerous signs of a porcupine's gnawing attentions, though it did retain a few raveled tags

of gristle. Hairs were stuck to it as well, long, straight, and coarse.

"Some poor hunter," said Howie. "Got taken for a deer. Happens too damned often."

"Ayuh." I stooped and stirred around in the litter at our feet. I found more bones, a piece of an upper arm, most of the pelvis, a handful of fragments. There was no trace of clothing, no buckles or buttons, no shells or guns or knives. No hunter's orange. I snorted in disgust.

"Whoever it was must have stripped him."

"Less he was naked in the first place."

"Hah." I snorted again.

"Don't laugh. I've heard tales."

"What kind of tales?"

He spat a stream of dark tobacco juice into the snow. "You know. And look." He pointed at the skull. "It ain't your usual head."

He was right, again. As I examined it more carefully, I saw the wisdom teeth, the receding chin, the heavy brows. With a little imagination, I could put flesh back where it had been. "He couldn't have been any too handsome. Not that it matters. We'll have to take this back."

"Give it to the sheriff?"

"Of course." I handed the skull to Howie with a grimace. "Here. You've got bigger pockets. I can handle the rest of this."

We left with the skull bulging out the game pocket in the back of Howie's

parka, the pelvis swinging from my left hand, the other bones filling my pockets. I wondered at the time if I would be able to stand to wear my coat again. I didn't expect Howie to have any such trouble.

The sheriff's office was next door to the town hall, in an old brick building that should have been condemned years ago. As it was, neither the state nor the county could afford to build a new jail. They were even hard put to it to keep the plaster patched and the pipes painted, and while the prisoners didn't complain about their cramped, dim cells, the do-gooders did. The sheriff, Ben Quimby, figured he didn't need to worry about the bitching until his charges managed to push a wall down and escape. Nobody wanted to bet they wouldn't do it one of these days, but so far the closest any of them had come was the fellow who popped the bars out of the crumbling mortar of his window. He'd gone down-street for a pizza and a beer and been back before morning.

Ben was a small, slim fellow who wore a delicate line of hair on his upper lip, kept his badge buffed and his holster polished, and favored knife-edge creases in his trousers. He liked to look sharp, and he knew he did.

When Howie and I showed up in his office, he was reading the latest *Playboy*, feet up on his desk. "Put the tits away, Ben," I said. "We've got business for you."

"Hah!" he said. "They've got a lady

sheriff this month. See?" He held the magazine up and let it unfold for us. We saw. The badge, as shiny as his, didn't cover much. "But what you got?"

Howie bent his arm around to get at his game pocket. I dropped the pelvis on Ben's desk, beside his left boot. He jerked the boot away and sat up. Howie got the skull loose and held it up. I started fishing the rest of the bones out of my pockets. "My God!" said Ben. "Where'd you get all that?"

"Up on Frye Mountain," I said.

"Some hunter," said Howie. "Year or two ago by the look of him."

"We have not had any disappearances," said Ben.

I shrugged. "Maybe he wasn't reported missing. Maybe nobody knew he was here. Out-of-stater."

"Shee-it," said Ben. "I should have known it was too quiet around here."

"Means you and the chief are doing your jobs," I said. "That's the way we like it."

"Ayuh. So now I've got to go dig up the coroner."

"You'll let me know what he says?"

Ben eyed the remains again, licked his lips, and waved an arm. "Don't know why, Mayor, but sure. Give you a copy of his report, even."

"Fine." We turned, leaving the bones on his desk. At the door, I glanced back. Ben had the *Playboy* in one hand, staring at it. But duty called. He dropped the magazine and reached for the phone.

I had the report a week later. As soon as I'd read it through, I had Louise call Howie and tell him to drop by for a drink that night.

He showed up about nine. I let him in, shoved a drink in his fist, and set him down at the kitchen table. Then I waved the report at him. "That fellow wasn't a hunter, Howie! The coroner figured it out."

"What are you talking about?" asked Bonny. "What hunter?"

I looked at her, standing in front of the fridge, her own drink in her hand. I'd forgotten I hadn't told her what we'd found. "Didn't want you to worry, honey. But when we went hunting the other day, well, we found somebody's bones."

Her eyes widened, but she didn't say a word. I went on. "And the coroner says they aren't old enough."

"Old enough?" said Howie. Bonny looked puzzled too.

"Ayuh. What with no fillings and the shapes of the things, he says they're too new to be what they look like. Because that skull should belong to a Neanderthal."

"But they were in Europe, and Asia," said Bonny. "Forty thousand years ago."

"Ayuh," I said. "But that's what he said. And I believe him. He's a bright fellow, just out of school, and, besides, he put a picture of a real Neanderthal skull in the report." I held it out to Howie. Bonny stepped around until she could see too.

"Dead ringer, ain't he," said Howie. "Not so fresh, though. And nobody's seen them."

"So they stay out of sight, hole up in hunting season, when folks are in the woods. Except for one. Maybe they come out at night, and he got jacked."

"Might be why the deer are scarce," offered Howie.

"I suppose," I said. "Might have moved in here just a couple years ago."

"Too crowded down south."

Bonny nodded at that and drained her glass. "It would be nice to see them," she said.

"Ayuh," I said. "But we'd have to find 'em first."

"I can do that," said Howie. "Now we know they're there."

"How long'd it take you?"

He shrugged. "A day. A year. Depends how good they are at hiding sign."

I left it at that. I thought he might be bragging, but I surely didn't want to stop him trying. Just as well I didn't say anything, too, for a week later Howie joined me at the diner for lunch and said he'd done it. Did I still want to see 'em? Tomorrow?

Tomorrow it was. Howie drove Bonny and me up to Frye Mountain, took a track through the woods I hadn't seen before, parked his pickup, and led us off on foot. We walked for almost an hour, our feet crackling through leaves and twigs, scuffing the patches of unmelted snow. We smelled

the tang of distant woodsmoke, heard the silence, broken only by the occasional squirrel and a rare blast of a shotgun. The deer season was over, and with it went the rattling of rifles, but now the rabbit season was with us. "'Cept the bunnies ain't there neither," said Howie.

The hike, pleasant as it was, had to end sometime. I noticed we were headed for a bluff, a shoulder of the mountain marked by boulders and ledge. There was a low rise between us and it, and Howie halted us just before we could see over it. "They're in the hollow just ahead," he said. "In caves. So belly down, now." We did as he said and crawled the rest of the way, as quietly as we could, though our noise — even Howie's — seemed loud to me.

When we reached the top of the rise, there was a thin screen of brush before us. The branches were leafless and we could see, but I didn't think we could be seen. And there they were. The caves, no more than clefts in the rock, backed a scatter of ugly figures. They were knot-featured, heavy-browed, short, and hairy. They wore no clothes, despite the December weather, and their feet were flat and strikingly large.

"How many?" I whispered.

Howie shrugged as best he could in his position. "Dunno. Some could be in the caves. Or hunting."

"Poor things," said Bonny. "They shouldn't have to live like this."

"It's all they know," I said. "We

haven't been any better off for very long, ourselves."

"I know," she said. "But...."

At that moment, there was a soft crackle behind us. We all rolled over to look, and we found ourselves facing a pair of the cavemen. Men, too, all too obviously. Their expressions were stolid, watchful, with no hint of menace. Still, a thrill chased down my back, and by Bonny's shudder beside me I knew she felt something similar. They each held a stone-tipped spear, and when they gestured with their weapons toward the hollow, we rose to obey.

When we came into view, the women and children dashed for the caves. The men gathered, spears in hand, to meet us. As we approached, we began to detect odors — this tribe clearly knew nothing of latrines, much less soap and water — and one of the men stepped forward.

He wasted no time. As soon as we were within speaking distance, he said, "Who you?" His voice was harsh, and his features seemed less clearly Neanderthal. I looked around and saw that the men varied. Their faces ranged from almost pure apeman to nearly human. I wondered if there had been some interbreeding over the years. With Indians, perhaps, or even whites.

When I didn't answer right away, he repeated his question, this time with a jab of his spear toward my belly. I answered him then, as civilly as I could. I told him we were hikers and

had found them by accident. When he seemed to understand, I added, as ingenuously as I could manage, "Do you all speak English?"

At that, he laughed and turned to his fellows. He spoke to them in a guttural, barking tongue. When he was done he told us, "Me Ngkurkha. Me listen hunters good, learn plenty. You got whiskey?"

So English wasn't all he learned from our orange-coats. I shook my head as Bonny said, "But perhaps we could get you better shelter, better food."

He grunted and turned away to speak to his fellows again. There was a brief outburst of barks and growls, and this time they all laughed. When he turned back, it was only to gesture at the two behind us and say, "Ngkurkha people got plenty. You no come back. Go!"

We left. Unarmed, we weren't about to argue, even with spears. Besides, we had seen as much as we wanted. The Neanderthals existed, we knew where they were, and if they wanted their privacy, we would leave them alone, at least until we had some notion of what we should do.

We didn't say much to each other till we were back in the truck, and then it was all of the "Did you see...?" variety. I remarked on the deftly flaked spearpoints and the lack of visible fire, Howie on their silence in the crackly woods, Bonny on their filth and thinness. By the time we were rolling

again, though, we had distance enough to think about what our discovery meant. "We can't leave them there," I said. "We need the game for the tourists, and we need the tourists' money."

"You can't move 'em into town," said Howie. "No way. They wouldn't take it. Too different."

"We have to do something," said Bonny. "We can't just let them suffer like that."

"They're not suffering," I told her.

"Happy as clams in mud," said Howie.

"It's all they know," I said.

And then we were home. As Bonny put the coffee on, she said, "But we do have to do something. Don't we? If only to take the pressure off the deer. And we can't just chase them out."

"Hate to see a war get going 'tween them and the hunters," said Howie. "Ain't sure who'd win." He paused, chewing his lip as if thinking something over. "I know a social worker who can keep her mouth shut about food stamps."

"I'll bet you do." I was getting the cups out. As I set them on the kitchen table, I added, "But that's not such a bad idea. Get them some regular food, show them how to use latrines or toilets, start them learning how we live."

"Ayuh. Maybe even get 'em a better place to live, like Bonny told 'em."

"Come to think of it," I said. "The town owns that old farm on the Doak Road. Got it for the taxes, and no one's bid on it yet at auction."

"Out of the way," said Howie. "A wreck. Pa'tridges in the orchard, though."

I nodded. "Woods all around, the river close by, they could keep up some hunting, too."

"But wouldn't the warden object?" asked Bonny. "I'm sure they wouldn't understand about bag limits and closed seasons."

"Get 'em Indian licenses. Natives, ain't they?"

The coffee was ready. Bonny poured it and we sat down. Then she said, "If they'll move in, I suppose that means they'll have more contact with the rest of us."

"Ayuh," I said. I pulled my pipe from my pocket and began to stoke it. "They'll all learn English. By the time the kids are grown, they should fit in pretty well."

"Have to fix the place up a bit," said Howie.

"Not much, not for them," I said. When Bonny began to look offended, I went on, "Clean the chimney, check the plumbing, get 'em a stove and a woodpile. Furniture and paint, they won't even want for a while, not after living in caves."

"You want to talk to the warden?" asked Howie. "He don't care for me much." I didn't wonder why. I nodded and said I'd see to the fix-up too, as long as he would try to talk Ngkurkha around. I wasn't particularly eager to face those spears again, myself.

And so it went. The place was

ready in a month, and by then Howie had talked Ngkurkha into taking a look at it. The man, if he was really that, wasn't terribly impressed, but he did recognize the value of decent shelter. He checked the woods for game sign, looked the river over, and sampled the supplies we'd laid in. Then he grunted and told Howie to take him home.

He didn't come back right away. In fact, he might never have moved in if we hadn't had an early cold snap, frigid enough to freeze the equipment right off any man without a proper set of thermal underwear. He came then, all right, and when Howie checked the place just after New Year's, he found a roaring fire in the stove and apemen all over the place. Each one had staked out his or her own patch of floor, and the hotshots were all in the kitchen, close to the heat.

When I was done, Mike grunted

and laid his notebook down. Bonny said, "They took it pretty well. No one's left, and I'm sure their lives are easier now."

"Their lives are still mostly their own, too," said Mike. "We — I mean civilization, anthropologists, soldiers, the works — we've messed up enough primitives already. You've got this bunch under your eye, but you're not forcing them. Not much, anyway."

"We did want to give them a chance," I told him. "To settle in as much their own way as our presence allows. But it'll be awhile before we get shoes on them."

Mike raised his eyebrows. "How so?"

"I told you they had big feet. They may even be the Big-Foot itself. The Sasquatch. Twice the size of mine." I propped a boot on one knee and let him look at it.

"But what's the problem?"

"Have you ever seen a size 24 shoe?"



Edward Hughes wrote "In the Name of the Father," September 1980. His new story is an after-the-bomb tale with an engaging and fresh approach, not the least of it stemming from the Welsh background.

A Born Charmer

BY

EDWARD P. HUGHES



At sixteen, his father promoted Dafydd Madoc Llewelyn. "Mab," said the *tad* casually, "I reckon as how you are old enough now to shoulder some responsibility. Owain and I have plenty to do about the farm. I want you to keep an eye on the sheep."

Dafydd scowled down at his boots to mask the disappointment. Guarding sheep was a dog's job. He had been hoping for real responsibility. He demurred. "If we are so short-handed, cannot the sheep manage without an eye on them?"

Unexpectedly, his father smiled. "Well, you won't only be watching sheep, will you? Doesn't the Bangor road go by the side of Moelfre? And would that not be the way the Raiders would likely come, if they wanted to get at Cwm Goch?" Then he punched Dafydd's shoulder proudly. "The Council has decided that Matty Price is

getting too old for sentinel. They reckon on you can take his place!"

Next morning, the *tad* unlocked the dining room cupboard and got out the twelvebore. Until then, Dafydd had handled the gun only under supervision. He watched his father thumb a shell into each chamber, then snap on the safety. "Two rounds should be enough, *mab*. One for 'Raiders sighted,' two for 'Help wanted quick!'" He proffered the gun to Dafydd, face serious. "Keep your eye on that road. Don't get personally involved. Let them take a sheep or two, if that is all they want."

Dafydd accepted the gun, hoping his father would not notice his hands trembling. He tucked it under his arm, muzzle down, as he had been taught. "I will be most careful, *tad*," he promised.

His father smiled again and patted

his shoulder. "Go and get your dinner now from the *mam*. Then get up that hill as quick as you can. It is almost daylight."

The wind blew cold on the slopes of Moelfre. The black slate roof of Careg Ddu lay out of sight behind the gorse-clad shoulder he had just climbed. Dafydd pulled up the collar of his sheepskin coat, turned his back to the rising sun, and scanned the fields and road below. The long slopes were dark green in the mountain's shadow. Clusters of white dots showed where the sheep had spent the night. Nothing moved on the road.

He pulled a hand from his pocket and casually conjured up a shotgun shell. Easy when you had the knack. And the poor old *tad* economizing on ammo because it had become so hard to find! If only he knew that his younger son could produce shotgun shells at will! Dafydd thought of the charmer they had caught in the village and shivered at the gruesome memory. Sorry, *tad* — some things had to be kept secret!

Not that Dafydd had anything against charmers. There were hardly enough of them to worry about. One in each million people, he had heard. He could even call himself a charmer — if he dared do publicly what he practiced in private. But folk were queer. Still blaming the charmers for wrecking their daft old civilization, and the war finished thirty years ago. Still ranting on about things you had

never seen — motion pictures, airplanes, oranges. But what you had never had, you never missed. And if some Russky really had charmed an H-bomb or two onto the English Houses of Parliament, more than likely the *Saesneg* had done it to the Russkies first. And why keep on about what happened years ago? The bombs had not touched Cwm Goch. Maybe a sprinkle of the fallout stuff blew over now and again, but, if you could not see it, taste it, nor smell it — how could you tell?

As he watched, the mist lifted from the humps of Yr Eifl and Moel Penllechog. He saw the sea, and he grimaced. Gone for good now, he was willing to wager, would be the sailing trips with the village lads. Brother Owain would make sure that brother Dafydd did not neglect his sentineling and his mutton-watching on Moelfre. Brother Owain was rapidly becoming a pain in the neck. Dafydd hitched bow and quiver more comfortably across his back, tucked gun under his arm, grasped his crook firmly, and started downhill. There was an animal bleating below — probably stuck in a thorn bush. Dafydd sighed. Dealing with a Raider would be more fun.

He gained the road before he found the plaintive teg stuck, legs up, in a ditch. The sun was warm. He shed coat and accoutrements, stooped to grasp a front and back leg. From the corner of his eye he saw a shadow move on the road. He flung himself sideways. A

hand gripping a knife swept through the space vacated by his shoulder blades. He kicked out, catching a wrist, sending a knife flashing end over end. The aspiring assassin yelled and dived for the weapon. Dafydd dived after him and got him in a headlock before he reached the knife. The man was undernourished; Dafydd held him easily despite his struggles. What a sucker he had been! Caught out on his first day as sentinel! Angrily he forced the man's head down. "What's the idea, eh?"

"Ifor!" yelled his captive. "Help!"

Ifor emerged from the cover of the hedge, knife in hand. "Hold him still, Tum," he requested.

Dafydd hid his shock. "Come any closer," he warned, "and your pal is a corpse."

"Get his gun," wailed Tum, now bent almost double.

"I will do that," agreed Ifor. "If only to prevent him letting it off. We don't want the yokels warned, do we?"

He reached the twelvebore before Dafydd could hook his foot around it.

"Now, my bucko!" Ifor waved the gun encouragingly. "Suppose you let Tum go. Then we can discuss things, reasonable like."

"I have warned you," panted Dafydd, not quite prepared to see if Tum's neck would actually break. "Bugger off, or your pal will suffer."

"You are being stubborn," persisted Ifor. "We haven't waited here all morning, listening to that blotty sheep,

to be easy put off." He darted sideways without warning.

Dafydd swung his captive like a shield. "Tum," he gasped, "tell your mate to piss off before I break your neck!"

The man struggled ineffectually. "Ifor! He is killing me!"

"Swing the bastard round," counseled Ifor. "I can't get at him with you in the way."

Dafydd tensed his muscles to resist any effort his prisoner might make. Ifor stood barely a yard off, knife poised. Then Dafydd heard the sound of hooves. A horse and rider, followed by a pack pony, emerged from the shadow of trees overhanging the road.

"Help!" yelled Dafydd.

Ifor cursed fluently. Fifty yards away the horseman kicked his mount into a gallop. Ifor half turned, one eye on Dafydd, blade ready.

The rider swung under his knife, striking behind the shoulder. Ifor screamed and dropped the knife. His arm hung limp. He hoisted the shotgun one-handed and swung after the horseman, trying to thumb off the safety.

Dafydd hurled his captive away. There was a shotgun in his hands. He blasted shot into the tarmac at Ifor's feet.

"Drop it!"

Ifor stared, unbelieving. "*Duw!* A blotty charmer!" He let the gun fall. Tum cowered on the road, wordless.

The rider returned, leading his horse. He said in *Saesneg*, "You didn't

need much help, friend."

Dafydd switched languages. "You spoiled his best arm. That was a good aid."

The *Sais* slapped a leather-covered sap on his palm and laughed. "What shall we do with 'em? Execute them here, or take them to your authorities?"

Dafydd glanced involuntarily from the gun in his hands to its twin on the road. "I do not think I want them to go to my village," he admitted.

"Mm." The *Sais* eyed both guns. "You must have quite a collection of those things."

Dafydd had not, but he did not wish the knowledge broadcast. The charmer who could get rid of things, besides producing them, was a very rare bird.

"I try to keep it quiet," he confessed.

"Better do 'em here, then," advised the *Sais*. "And quick. That shot will bring someone."

Dafydd nodded. "It is a signal. They will send scouts from Cwm Goch."

"Well, get on with it. Those villains have said their prayers."

Dafydd raised the gun. Ifor glared at him, nursing his shoulder. Tum sat uncaring in the road. Dafydd lowered the gun. "I cannot do it. The gun only came because I was angry, and I am no longer angry."

"Give it to me, then," said the *Sais*.

Dafydd handed him the weapon.

The *Sais* aimed it at Ifor. "Which barrel did you fire?"

"They are both loaded. But there must be only one more shot. The father gave me but two shells."

The *Sais* snorted. "You are being greedy. You want two for the price of one. Now there are two guns we can justify as many shots as we wish. Your father doesn't know how many shells I carry." He brought the gun up to his shoulder.

Dafydd closed his eyes. Then the words burst from him. "Stop! I cannot let you murder them."

The *Sais* kept the gun steady. "I am not bothered. The rogues deserve to die. They would have done for you. Let me do for them."

Dafydd shook his head. "Let them go. They are both hurt. And we have suffered no harm."

The *Sais* frowned. "There are probably more of 'em down the road, waiting for these two to report back."

"I do not care. The village is warned now. They will go away."

The *Sais* lowered the gun. "If only all the Welsh were as soft as you!" He gestured to the captives. "Go on — scat! Before I change my mind."

They hesitated, incredulous.

The gun roared. Shot sprayed over their heads. They fled like guilty schoolboys.

The *Sais* tucked the duplicate gun inside his saddle roll. He nodded at the sheep bleating in the ditch. "Suppose you get that cuckoo out of its nest,

while I find my pony?"

Dafydd had forgotten the trapped teg. He said, "I reckon my job will be easier than yours."

The *Sais* said, "I wouldn't bet." He put two fingers into his mouth and blew a shrill blast. "Sometimes he comes, sometimes he don't. Not always obedient like the horse." He whistled again, and the pony trotted from the shadow of the trees, where it had been cropping grass. The *Sais* laughed. "Just being awkward, you see!"

Dafydd grabbed the teg's legs and heaved. The animal came free, making more noise about it than when it had been born. Dafydd clapped it on the rump to send it squealing up the hillside. Then, grinning, he put two fingers into his mouth in imitation of the *Sais* and blew an echo of his whistle. The teg ignored him. The *Sais* applauded. "All you need now is a reliable horse."

"Or more cooperative sheep," Dafydd amended.

"My name," said the *Sais*, "if you are interested, is Long John Ledger. Of nowhere in particular."

Dafydd walked beside him, itching to take the horse's rein. The *Sais* was indeed long — well over six feet. Corduroy jacket and britches provided no clue to his origins. The moleskin cap was incongruous, but smart.

Dafydd introduced himself. *Saeson* were rare on the Llyn since the collapse of the pre-bomb English tourist

trade. There was novelty in strolling and chatting with someone from a different part of the world. He asked, "Are you traveling to Cwm Gŵch?"

The *Sais* halted while the horse voided a bladder. "I am making for Pwllheli. I have a date with the circus."

"Then you have plenty of time. The circus is not due for a month."

The *Sais* clapped hand to mouth. "A month in front of myself, am I? They must have sent me out early, without letting on."

"Who would they be?" asked Dafydd, curiosity vanquishing his politeness.

"House of Correction in Bangor. I usually arrange to spend the winter somewhere cozy. They must have grown tired of feeding me."

"What did you do?"

"Stole something — I forget what." The *Sais* shrugged, without embarrassment. "It doesn't matter."

"And what do you do for a living?"

The *Sais* doffed his cap and bowed. He extended a hand, fingers spread wide, made a fist, twirled his wrist, and fanned out a pack of cards.

"A charmer!" Dafydd could not believe his eyes.

The *Sais* laughed. "No, sir — a conjurer! Innocuous and entertaining. I do parlor tricks *ex tempore*, and more impressive productions, given time. I have a contract permitting me to set up a stall within the perimeter of the circus area at Pwllheli in June."

"Since you have a month to spare,"

Dafydd suggested, "you could put on a show in Cwm Goch."

"It is an idea," admitted the *Sais*. "Do you pay in money in Cwm Goch?"

"What is money?"

The *Sais* rummaged in his pocket. He brought out a couple of carved bone tokens the size of coat buttons. Dafydd examined them. Each had a face and a date cut into one side, and on the reverse, the larger showed the words *One Pound* and the smaller *Fifty Pence*. Dafydd returned them to the *Sais*. "What use are they?"

Long John Ledger laughed. "No use at all, Dai my innocent." He tossed the coins into the air, caught them, and showed Dafydd an empty palm. "Voilà! The quickness of the hand deceives the Dai! But they are used in London Town — which is where I got them. And sometimes I am able to persuade tradesmen here and there to accept them as payment, since they are carved from ivory and cannot be charmed.

Dafydd shook his head scornfully. In Cwm Goch you discharged a debt with your creditor, and there was the Arbiter to decide the value of a lamb — or a day's work — if you were not able to agree. The Arbiter would also hold IOUs until quarter day, if you wished.

He said, "We can carve our own bones, man. You would be lucky to get anyone I know to accept those things — although, strangely enough, we use the same words on our IOUs."

Long John allowed a fifty piece to reappear. It jumped from knuckle to knuckle across the back of his hand. "Pounds and pence are words that come from before the bombs, when everyone used tokens like these. They have been reintroduced in London to make trading easier."

Dafydd recalled illustrations in the *mam's* book. "I have seen pictures of London. Does the King still live there? We have our own King Rhys in Caernarvon, now, you know."

King Rhys of Ruthin was also Lord of the Llyn Peninsula. Dafydd remembered being taken to Conway for the coronation.

Long John palmed the tokens. "You could call him 'king' I suppose. Most Londoners call him 'The Owner' because he owns the town. I am told he makes charmers welcome."

Dafydd made a face. "That would be a change. Perhaps, one day, I shall get to London and see if I am welcome."

Cwm Goch Defense Force were manning the roadblock at the junction for Pentre-bach. Dafydd greeted them. "It is all right. They have gone."

Blacksmith Idris Evans, Commander of the Cwm Goch Defence Force, called, "Stand easy, men!" Forty-odd assorted weapons were uncocked, forty-odd faces turned to Dafydd and his companion. In a quieter voice, Idris asked, "Who has gone, *mab*?"

Dafydd waved airily. "The Raiders — they ran away."

He heard the *tad's* voice from the hillside above the barricades. "How many shots did you fire, Dafydd?"

"One." He pointed to Long John. "He fired the other." Dafydd stopped hurriedly, fingering a nonexistent stone from his boot, hoping the *tad* would not notice the flush in his cheeks.

"I said there was two," commented an anonymous voice.

Emrys Jones the Buss, Senior Village Councilor and only man of Cwm Goch tall enough to match the *Sais* for height, said, "And who is this?"

Long John Ledger swept off his cap. He bowed. "A lone traveler who was able to give assistance to this stalwart youth in a time of need."

Forty-odd pairs of ears pricked at the sound of English. Emrys switched languages courteously. "And what are you doing here, stranger?"

Long John explained at length.

"And those Raiders? You are sure that they have gone?"

"Like rabbits before the reaper."

Emrys drew himself to his full six foot four. "We thank you, Englishman, for the assistance you gave our sentinel. Welcome to Cwm Goch!" He turned to Dafydd. "Well done, lad!"

Dafydd felt his chest swell. The ticklish part was over. Now he could enjoy himself.

Emrys made a sign to Idris. Commander Evans raised his voice. "Troops — form up!" Forty-odd pair of feet shuffled through an ill-practiced

drill which eventually had them all in lines facing back toward Cwm Goch. "Forward march!"

The commander was now at the rear of his troops. He dropped back to chat with the *Sais*. Dafydd shouldered the twelvebore in Defense Force style and got into step. Maybe, after this, he would be permitted to go on the slate at Jones the Pub's tavern.

He heard the *tad's* voice from the head of the column. "*Mab! Who minds the sheep?*"

Dafydd sighed. Ten steps, and his glory was used up! He fell out of the column. From the slopes of Moelfre, he watched the Defense Force disappear into the dust.

"No," said his father. "You may *not* go on the slate at Jones the Pub. Not even if every lad in the village is on it already — which I do not believe. You are far too young to be drinking spirituous liquor.

"But — *tad!*" Dafydd bleated.

His father's eyebrows came down darkly, like a line squall. "But me no 'buts,' lad!" His eyes went to the window. "I see Ceinwen Thomas is taking the cow to be milked. If you care, you may go out immediately and talk to her. Otherwise you have my permission to stay and help your brother and me prepare the sheep dip for tomorrow."

Dafydd got himself through the doorway almost before his father had finished the sentence.

Ceinwen Thomas was not exactly

pretty, but Dafydd liked her well enough. When the only alternatives were fat Blodwen Hughes, Gronwy Jones the Schoolmistress, or Mari Evans who resembled her *tad's* pigs — well, prettiness was not important. Besides, Ceinwen was a good sport — and, also, she had Dafydd's parents' approval. The Thomases lived in the largest house in the village. Before the bombs, the story went, they had run something called a teashop, supplying English holiday-makers with food and drink. The cow was all that remained of the business, but Tecwin Thomas and Arfon Llewelyn still honored a pre-bomb agreement by which Ceinwen's father pastured a cow on Llewelyn grass.

Dafydd caught up with her at the gate to the milking parlor. She said, "Where was you today, Dai? Howel and Gethyn was looking for you in the village."

He said nonchalantly. "I am sentinel, now. Taking over from Matty Price. And I have also to keep an eye on my sheep."

She cocked her head on one side. "Oh — it is important we are, now, is it? Well, did you hear about the *Sais*?"

Dafydd, who had spent his second day on Moelfre almost hoping the Anglesey Raiders might return to relieve the boredom, said, "What about the *Sais*?"

Ceinwen tethered the cow to a ring on the wall. She got a pail and a stool, then rinsed her hands at the yard

pump. "He has been doing what he calls conjuring tricks. You know — making things come and go, without you spotting how."

He nodded. "I have seen him do it."

"Well, then, he has been fooling us all. Blodwen Hughes, who is helping Jones the Pub where your *Sais* is staying, went up to do his room. She found a Purdy twelvebore hidden in the wardrobe. It is the exact twin of your *tad's*."

Dafydd felt the color rising in his face. "There are hundreds of twelvebores like my *tad's*," he objected.

Ceinwen sat down on the stool, pushed her head into the cow's flank, and began to stroke the teats. "With a mended trigger guard like your *tad's*? Remember when he broke it over the back of that fox, the day he ran out of shells? Blodwen got Idris to go and look. Idris said the repair was his own work — he would know it anywhere."

Dafydd flushed hotly. "Are you trying to say the *Sais* is a thief?"

The milk made ringing sounds as Ceinwen began to direct alternate streams into the pail. "Oh, no! We know you're still got your *tad's* gun. Your man is a charmer. They have him locked in the old Post Office. The Council are going to deal with him tomorrow. He is lucky none of King Rhys' men are in the village — they would not wait that long!"

Dafydd's throat felt tight. The last charmer taken in the village had died painfully. "What will they do to him?"

Ceinwen wiped the sweat from her forehead with the back of her hand. "Some of the Council wanted him put down straight off, but Pastor Roberts appealed for clemency. He said, if the *Sais* couldn't see, he wouldn't be able to charm — so they are putting out his eyes in the morning."

Dafydd could not sleep. Around two o'clock, judging by the stars, he got up and quietly dressed. In the village below they had a man locked up for a charmer. He had only to open his mouth to put Dafydd Madoc Llewelyn in a similar predicament. Why had Long John not spoken out?

Dafydd eased up the sash and climbed through the window. It was an easy drop onto the roof of the unused chemical privy. He soft-footed across the yard, vaulted the fence, and was off down the hill, wet grass soaking his trousers. The moon provided enough light for him to reach the village without mishap.

Cwm Goch slept. Dafydd avoided the outpost sentinels, and found Willie Evans on watch before the Post Office door. Fleetest runner in the village, Willie, but not very bright. Dafydd shook him awake.

"Willie — I want a quiet word with the *Sais*. Go take a walk. I'll keep guard."

Willie stumbled to his feet. "I've been wanting to go to the back."

Dafydd gave him a push. "Now is your chance, boyo."

The old Post Office was a converted

wooden barn, unused for postal purposes since the bombs. An enormous wooden beam, doweled into position, barred the door. Shuttered windows were similarly fastened. The ex-barn had held charmers before. There was no way Dafydd could have released the *Sais* without rousing the village.

In English, he hissed, "Are you awake, Long John?"

The *Sais* whispered back. "Would you be sleeping under the circumstances? Who is it?"

"It is me, Dafydd. What are you going to do?"

"What can I do, friend? I was foolish to keep that gun. I had thought to swap it for a few necessities in Pwllheli. See where it got me?"

"Why have you not told them who the real charmer is?"

He heard a rueful laugh. "Is that what you want, Dai?"

"*Duw!* No!"

"It wouldn't help, anyway. We would both finish up as suspects. And some of the tests for charmers can be fatal, even though you are innocent. What's the testing process in Cwm Goch?"

Dafydd choked. "They — they are not going to test you. The Council has already decided. They are going to blind you to make sure you never charm no more."

"Mm ... how exactly do they plan to do that, little Welshman?"

Dafydd tried to recall what Ceinwen had said. "They will pluck out

your eyes — I think." He hesitated. "I have heard that it is not very ... painful."

Long John was silent. Dafydd said, "I am sorry."

"It is not your fault, lad. How exactly do they manage the job? Come on, little friend. I can take it."

Dafydd's voice trembled. "Last time they used a spoon. I can just remember. I was not very old. Afterwards, the soldiers chopped off his head."

"But I am to be spared the last indignity?"

"Pastor Roberts pleaded for your life. He said, if you was blind you could not be a charmer. And so they should not put an innocent man to death."

The *Sais'* voice was suddenly urgent. "Dai, can you get me out of here, now?"

Dafydd studied the old barn joylessly. Built entirely from timber, dowels — no nails, no charming could touch it. "There is nothing I could do that would not make a noise. And Willie Evans is watching from over the road."

"Damn Willie Evans! Can you set fire to this place?"

"Why — are you loose in there?"

"I am tied to a chair, hand and foot."

"Then it is too dangerous. I will try to think up something for after they bring you out tomorrow."

There was a tremor in the *Sais'*

voice. "Think hard then, Dafydd. They are the only eyes I've got."

He was first up and dressed next morning. When his mother came down, he said, "Can I go to the village today?"

His *mam* said, "And who will watch the Bangor road?"

He fiddled with a coat button, avoiding her gaze. "Old Matty Price is still keeping an eye out. They have not told him yet that I am sentinel also. It is just that his eyes are not so good as they were. Can I go?"

"You had better ask your *tad*."

"I only want to see what they do to the *Sais*. Then I will go up Moelfre."

The *mam* lit the ready-laid stove with a big Cardiff match. "I am surprised you should say that, *mab*. I am sure I should not like to watch what they do to him this morning."

"Do you not hate the charmers, then, *mam*?"

He found himself staring into a pair of placid grey eyes which made him feel vaguely uncomfortable. Suddenly he was glad that the *Sais* was his friend. She said, "*Mab* — it is wrong to hate anyone. This *Sais* has done us no harm."

"But may I go?"

"Ask your *tad*."

His father said, "We had enough of you last time. Nightmares — waking up screaming. You get on up Moelfre as soon as you have finished breakfast."

Dafydd bit his lip. Unless he got to

the village, Long John's eyes were forfeit. If only his father appreciated that.

"But *tad* — it is important!"

His father's eyebrows made a menacing line. "One Llewelyn at this morning's pantomime will be sufficient. Your brother is staying here. You will be upon Moelfre doing your duty. Is that understood?"

Dafydd nodded meekly.

Once over the gorse shoulder, he dropped down to the road and worked his way back to the village. The sun was well up, and people were about by the time he reached the gate of the Thomas milking parlor. Ceinwen was closing the door of the cool house.

He hissed. "Ceinwen! Will you do us a favor?"

She came to the gate. "Shouldn't you be up on the hill?"

He nodded. "My *tad* thinks that is where I am." He hesitated only a moment. There was no time for cajoling. He had to take her into his confidence. "Listen — do you think that poor bloody *Sais* deserves to lose his eyes?"

She picked at the wood of the gate. "My *tad* says charmers should be destroyed like vermin, because of the damage they have done."

"I am asking you — not your *tad*."

"Don't shout at me, Dafydd Llewelyn. I am not your wife yet."

He held back a ready response. "I am sorry, Ceinwen. Will you help me to save the *Sais*' sight?"

"It might be dangerous. Why do you want to help him?"

"He saved my life. Surely I owe him a good turn."

"My *tad* says —"

"Sod your *tad*! I am talking about an innocent man's eyes."

"How do you know he is innocent?"

"Because —" He balled his fists in frustration. His mouth opened and shut. It came out in a rush. "Because I am the charmer! I charmed that spare gun."

"Dail!" Her eyes grew round, like big daisies.

"Look!" He laid his hand on the top of the gate, palm up. A shotgun shell appeared in it. "Now do you believe me?"

She grabbed the shell from his hand and flung it far into the grass. "Dai — you must not let them find out!"

"Don't worry — I won't," he reassured her. "But I've got to help the *Sais*."

She said, "What do you want me to do?"

The square in Cwm Goch was crowded by the time Dafydd climbed, crouching furtively, onto the roof of the schoolhouse. Owen Owen the carpenter had knocked out the security dowels holding the bar which closed the door of the old Post Office. Two helpers withdrew the great beam. Then they carried out the *Sais*, chair and all, and brought him to the war memorial. Six bowmen stood in a semicircle, arrows nocked. The porters loosed the *Sais* from his chair and bound him

with hempen rope to the pillar of stone. They tied an extra ligature to hold his head immovable.

Pastor Roberts in full canonicals stood behind the archers. The voice of Emrys Jones, speaking English, carried clearly to the school roof.

"Englishman, you have betrayed yourself as a charmer, and it is useless to deny it. By the law of the land, you should die."

Pastor Roberts raised his voice. "Thou shalt not suffer a witch to live, Exodus, chapter twenty-two, verse eighteen."

Emrys ignored the interruption. "Sightless charmers cannot harm. Ergo, they are no longer charmers. Do you understand the need for you to be sightless, Englishman?"

Long John Ledger responded in a loud voice. "I have done you no harm. I intend you no harm. Let me go, and I will leave Cwm Goch."

Emrys Jones wagged his head. "Rhys of Ruthin would hardly accept that as a valid excuse for releasing you. And we are accountable to him."

"It is not the harm you do now," pointed out Tecwin Thomas. "It is the harm your kind have done in the past."

"The sins of the fathers —" began Pastor Roberts.

"Shut up, you old fool!" yelled Ceinwen's father.

"Keep me prisoner while I send an appeal to King Rhys," suggested Long John.

Again Emrys Jones wagged his

head. "You are playing for time, Englishman, and we have none to spare. Executer!"

No one moved.

Emrys Jones turned round. "Where is Dylan Williams?"

A voice. "He is not here."

"Then who has the spoon?"

No one spoke.

Emrys Jones said, "I will get another."

In silence the Senior Councilor crossed the road, entered his house, and returned with a teaspoon. He called, "Stand forward who will do the job!"

No one moved. A voice called, "Find yourself a soldier!" Dafydd thought he recognized his father's laugh.

Emrys puffed out his cheeks, as he did when faced with knotty Council problems. "I am sorry that no one is prepared to undertake an honorable task. I suppose I must do my own dirty work." He turned back to the *Sais*. "If this hurts too much, Englishman, I apologize. But, consider: it is better to lose your sight than lose your life — and it will be over in a minute."

He approached the *Sais*, spoon raised.

Dafydd dared delay no longer. There was no chance, now, that Long John could talk himself out of this fix. Dafydd glared at the pillar to which the *Sais* was bound. He knew the war memorial as well as he knew his own front door: from the triangular apex,

past the catalogue of names on its face, to the base — chipped by a Raider's bullet long before he was born.

He charmed, and the war memorial disappeared. The *Sais* stood free, bonds hanging loosely around him.

"Archers!" shrieked Emrys.

Dafydd charmed again, a picture from the *mam's* book clear in his mind. And, like some medieval knight, the *Sais* stood in a replica of the armor worn by Edward Plantagenet, Black Prince of England. The crowd fell back. A nervous finger twitched, and an arrow bounced harmlessly off the *Sais's* breastplate.

Dafydd put two fingers into his mouth and blew a shrill blast. Down at the tavern, Ceinwen Thomas opened a stable door to push out a horse and a pony.

Dafydd whistled again. The horse whickered and came up to the square at a smart trot, towing the reluctant pony.

The Black Prince had his sword out.

"Back!" he ordered. "I command you in the name of Sir John Ledger de Main!"

The bowmen retreated before him. On the far side of the square a man raised a shotgun, and pulled the trigger ineffectually.

Dafydd grinned.

He looked anxiously up the road towards Pastor Roberts' chapel. It was high time his diversion was showing. He glimpsed the unnoticed wisps of

smoke trailing from the chapel windows. From the cover of the school-house project, he yelled, "Fire! The chapel is on fire!"

He heard Pastor Roberts' high-pitched shriek. Other voices took up the warning. When he dared to look, the crowd was streaming up the road towards the burning building. •

Sir John Ledger de Main stood alone in the square. His horse and loaded pack pony trotted up and halted, whinnying at the unfamiliar armor. The Black Night got leisurely onto his mount. He raised the sword in salute.

"Elegantly done, Dai! You did not need much help, that time!"

Dafydd glanced nervously up the street to where the chapel burned. The damp straw he had set smoldering in the chancel that morning was still producing enough smoke to hold the firefighters' attention. He stood up to wave at the Black Knight. "Time you were on your way, *Sais*!"

The Black Night waved back. "Thanks for my eyes, little Welshman. Don't forget London when your luck runs out here!"

Then Long John Ledger sheathed his sword and was off down the street, like some lone Crusader on his way to war.

Dafydd waved until he was out of sight, then turned his attention to the burning chapel. Encouraged by Pastor Roberts, the population of Cwm Goch had formed bucket chains to drench the chapel through door and windows.

They appeared to have forgotten Long John. Dafydd sniffed scornfully. Without the backing of King Rhys' soldiers, Cwm Goch hadn't much stomach for charmer-baiting. They would probably make sure the fire was not out while there was a chance that the mail-clad menace was still in the village! Dafydd eyed the dense billows of smoke. He had piled the straw well clear of the wooden pews, so there was little chance of serious damage. Maybe Pastor Roberts would want some sooty stonework scrubbed later on: Dafydd Llewelyn would be pleased to volunteer.

The wind veered, sending smoke down the street to envelope the school-house roof. Dafydd coughed amid the fumes and grinned. It had been a good charm — one the *mam* would surely approve of, if only he dared tell her. A full suit of armor, by damn — and only a picture to work from! And everyone convinced Long John Ledger was the culprit!

Everyone, that is, except —!

Dafydd launched himself down the incline, no slippier nor steeper than some of the slopes on Moelfre. Time to go before his fellow conspirator arrived dying to blather on about the

success of their plan. He dropped from the drain pipe, picked himself out of the dust. He saw her running up the street from Jones' tavern. Ceinwen who knew his secret. Ceinwen whose father would not see reason about charmers. Ceinwen who maybe now thought she had a hold on Dafydd Madoc Llewelyn....

He shivered. He was in no mood to face his new ally. In any case, the firefighters would soon discover the fire was arson and come looking for the criminal. The *tad* among them. He could hear his father's voice. "*Dafydd — who minds the sheep?*"

He turned towards the square, concentrated, and restored Cwm Goch's war memorial, bullet chip and all. Then he started back up the hill towards the slopes of Moelfre. Ceinwen Thomas, and the future, could look after themselves for the time being. Dafydd Llewelyn now needed an alibi that only absence from the scene of the crime could provide. Let the *tad* tell him all about Long John's escape and how the chapel went on fire when he got home that night.

Dafydd smirked, tasting the wine of success. Too young to drink spirituous liquor, was he?



In which the autochef in the Boothfield kitchen goes bonkers, which may sound like a matter for some amusement, until you realize that the apartment is sealed and the aliens are coming . . .

Upgrading the Kitchen

BY

COLEMAN BRAX

For two weeks I'd been living on handmeals and sleeping at erratic hours. That schedule hadn't helped me get along with Ewald any better; I'd scarcely seen the boy. And Vic the Family Kitchen had been acting up again despite his recent overhaul. But my busy time was over; I had *that* to be thankful for. After two frantic weeks, the shuttle pilots had affixed their signatures to NASA's contract.

So I was cycling home happy, my reputation as a durable negotiator nicely intact. Got a problem in labor relations? Call Sara Boothfield. My ad's in the Classified.

If only, I grumbled to myself as I pedaled uptown. *If only I could show some promise as a mother.*

At the apartment, the lock licked my hand and decided that I tasted right. Bolts pulled in; the door slid open. Ewald was sitting in front of the

screen again and didn't bother to say hello. Nor was I greeted by aromas from Vic's cookery.

"Ewald, dammit," I said. "I don't want you watching that Wik'ret nonsense any more. I keep telling you that, but you don't seem to care."

He brushed aside a red cowlick, glanced at me quickly, then turned back to the screen. According to my handbook, that's a typical ten-year old's reaction to orders.

"Ewald, I said no more Wik'rets! You know the Church Council condemned the broadcasts. And the Teacher's Union says they're interfering with your *real* education. I mean, even the astronomy they teach is weird."

"Real education, my backside," he retorted with unaccustomed delicacy. "Lot of good it'll do me when the Wik'rets come."

"If the Wik'rets come," I countered, having long scoffed at that notion. If those aliens were planning to visit us, then why hadn't they done it right away? Why were they bothering us with this lengthy instructional phase? "And another thing," I added. "The Soviets say they're going to jam the signals. They're sending a new steerable satellite into orbit that'll hop around following the Wik'ret beam. So you'll have to quit soon anyway."

Ewald raised his hand in the three-fingered "be quiet" signal I'd learned to accept from him. He moved closer to the screen. The alien was talking about maze-runners and errand-runners and who-knows-what.

"The evolution of cyborg intelligence," it said, "should be viewed as an idealization of the evolution of organic intelligence. The earliest examples merely imitated the behavior of simple animals...."

I stared at the fuzzy squared-off head on the hunched bipedal body for a few seconds, then stalked away. Maze-runners indeed! Ewald would have to learn something more practical than that if he was going to have a chance at supporting himself. If I was to continue as his foster-ma, I'd see to it.

But dinner was my immediate concern. I entered the kitchen. Vic was droning in a deep voice I didn't recognize.

"Seventeen point one ... seventeen point one ... seventeen point two ...

seventeen point three...."

"Vic?" He didn't turn on the lights for me so I thumbed the manual switch. Vic's scuffed control panel appeared lifeless.

"Seventeen point three ... seventeen point two...."

"I've got a repair call in Vic. Don't you think you could settle down until they get here?"

"I've been monitoring the temperature of the livingroom. The thermostats are inefficient."

"Vic, that's not your concern. I'm asking you to make dinner for us. Nothing else."

"I am unhappy tonight."

"I understand, Vic." I dampened a sponge and wiped off some dust that had accumulated on the lip of his oval speaker port. "These past two weeks have been difficult, I know. But I'll be keeping regular hours for awhile. Ewald and I will be depending on you."

"Then I will make a great paella tonight...."

"No!" I blurted it out before I could stop myself. I detest paella, probably always will. That's because for my first two months in the apartment, I let Vic serve it every night. It took me that long to learn to say no to him.

"Sara..." he said mournfully.

"Listen, Vic." I knew that reversing myself wouldn't satisfy him. But if he was in a Spanish mood, I thought I might reach a compromise. "How about *sopa de ajo*? We haven't had it in

awhile. And after that a nice *estofado*."

"Paella Valenciana!" he said in an anguished tone. But then he stopped talking and I heard rustlings from behind his panel. Having spent considerable time watching the repairfolk, I recognized the hum of his cellulose spinner and the soft whoosh of his carbohydrate extruder. It was evident that he had decided to cook something; I tactfully withdrew.

I ducked into the bedroom to get out of my clothes. The hobnail boots had been pinching all day. And what a relief to pull those suspenders off! I always feel five kilos lighter without them.

I put on my robe and slippers, then ran back to peek into the kitchen. Vic seemed to be at work, so I kept my silence. I keyed in a thirty minute service time. On the way back, I saw that Ewald was drawing more Wik'ret squiggles on a pad of paper. Condensed algebra, he calls those squashed ovals with lines sticking out of them. Condensed algebra, my funnybone! He was wasting time he should have been spending on homework.

But to hell with that for now, I thought. I needed a bath in a hurry. I closed the translucent door, flopped into the mummy-case, and pulled down the lid. The water, a bit cold, began to rush in. A flick of the fingertip brought the temperature up to perfection. Ah! Now that's what I call low-cost luxury. Bathing in eight liters of water doesn't

make me feel a bit guilty. I wriggled my big toe to switch on the overhead reader. It was still set where I'd left it, in the third chapter of *Vampires on Ice*.

The water gurgling past almost every square inch of me felt very soothing, but I couldn't interest myself in the book. Ewald was on my mind. Poor little Ewald. He was a cute one all right. It was sad that he was so hard to handle.

A Single with an erratic lifestyle ranks low on the waiting list, yet I'd become a foster-ma just six months after signing up. That was because Ewald had been ejected from his five previous homes and I was the only one foolish enough to take him on. And with no prior experience, I had a slim chance of making it work.

"Ewald is just too bright," the agency gentleman had told me in sentences punctuated by drafts on his smokeless cigar. "He needs an atmosphere of intellectual stimulation. (Puff). You have one degree in Literary Psychology and another in Marine Embryology. (Puff Puff). You're the kind of person he needs to be around."

That remark flattered my ego. Too bad the man was wrong. It was true that Ewald needed challenges he couldn't get in school, but I'd had no luck at providing them. I bought him a "Subway Riots of Ninety-two" game and he beat me at it every night for a week. It didn't matter whether he took the part of the kids or the cops, he always won. Then we both agreed to

swap the game for cola rations.

Well, I stayed in that bath awhile fretting but I just couldn't come up with anything. I even thought, maybe I'd watch some of the Wik'ret broadcasts so we'd have more in common. I'd learn the Calculus of Perceptions and the Quantification of Pleasure. But I shelved that thought. I don't like even *looking* at those critters.

I punched the "rinse" button, let it run for a minute. Then I switched off the bath and pushed up the lid. A nice facial lather at the sink completed my ablutions. I felt cool and clean, sufficiently recovered to take on Vic again.

I slid into a dashiki and sandals. When I came out of the bedroom, I saw that Ewald had finally shut off the screen. He was still staring at the doodles on his pad.

"They'll never do it, Sara."

"Who'll never do what?"

"Jam the beam. The Soviets, that is. The Wik'ret drone takes evasive actions."

"All right. All right. If you say so. But you're ruining your perfectly good brain."

A silly smile crossed his face as his hand shot up and tapped the top of his head. That gesture means something like "I'm part of the harmony of the spheres." Wik'rets! Aaaargh! I retreated to the kitchen.

Vic, to my delight, had his green light on. A Caesar salad was waiting for us on his output tray. I called Ewald and we sat down to eat. Vic, un-

expectedly in an Italian mood, followed the salad with *brodo di pesce*, and then a distinguished soy-cheese lasagne. Even Ewald was impressed by Vic's versatility.

Dinner conversation was sparse, however. I tried to get him to talk about school and his friends and so on, but all I could elicit were remarks like "you know how it is ... you know ... you know." Unfortunately, I didn't.

After dinner, I praised Vic extravagantly. His "thank yous" were so sincere that I considered canceling the repair order. Not that it would have mattered.

Ewald went off to play with his electron microscope while I caught up with the back mail. I sat in front of the viewer and disposed of nine bills, eighteen fund-raising pitches, and a half-dozen new proposals for low-cost insurance. (Protect your bike against tidal waves for only a dollar a month!) My level of junk mail was definitely too high. I resolved to adjust the sieve, but right then I was too tired to plow through the operating instructions.

So I said goodnight to Ewald and reminded him not to fall asleep with the lights on. I collapsed into bed. The last three days of negotiations, I realized, had sapped all my reserves. The sheets were cool and silky. I was out before I could roll over.

It was the smell of garlic, I suspect, that woke me around two a.m. The

room was steamy. I swung my legs out of bed, felt something warm lapping at my knees, and screamed.

Somehow I got the lights on and pulled my legs back onto the bed. The water started to drip onto the sheets so I tried to hang my feet over the edge without stepping back into it. The liquid from the wet pajama bottoms was already creeping higher.

"Ewald!" I had to shout four or five times before he heard me through the wall. "I think we've got a plumbing problem!"

Ewald is a sharp kid. He figured out right away that I was wrong. "Taste it!" he shouted back.

I looked at the cloudy lake surrounding my bed. There were little chunks of white stuff floating in it. "No thanks," I called back.

"It's *sopa de ajo*. Vic's trying to drown us in it."

I knew he was right. As soon as he said it, I recalled the smell and texture of the soup. I grabbed the phone off the nightstand and punched for emergency repairs.

"There are twelve emergency calls outstanding," said the synthesized voice. I gave my name and number, slammed the off button fiercely. Then I explained to Ewald, shouting each word, that we were going to have to handle the problem by ourselves.

He waded into my room. The stuff was well above his knees. "This is a Spillproof, isn't it?" he asked.

"A spillwhat?"

"A Spillproof apartment. Built so you can't flood anyone else ... or burn out anyone else ... or blow up anyone else. Something goes wrong, the trouble's sealed into this one unit."

I didn't like the sound of that. "What makes you think so?"

"There's a plaque in the lobby. I read it."

Leave it to Ewald to go off in a corner and read obscure plaques! "So what does it mean?"

His pajamas were soaked up past his waist. He peeled off the shirt in disgust and threw it across the room. "No way out, that's all. No leaks. The ducts seal off when the level gets up to them, so eventually no air. The door won't open. The windows never did ... It's just like a tomb."

"Don't use that word."

"Sorry, Sara. But it's true."

"Do me a favor, Ewald. Go try to open the front door. Don't actually do it yet, but see if it's possible." He splashed out. I heard him swirl through the livingroom to the door and I heard him struggle with the lock.

"It's no use!" he called. He was back a moment later. "Level's rising. I can tread water for maybe half an hour. How about you?"

"Don't be silly. We can pile up furniture. That'll get us to the ceiling."

"At least we won't go hungry." He lifted his fingers and licked them off with exaggerated relish.

"Stop that!" I took the plunge and waded into the flood. It was not at all

pleasant. The soup was sticky and lukewarm. I didn't like the white chunks brushing my ankles, even knowing they were just bits of synthabread.

"I'd better have a chat with Vic," I said gloomily.

"I think he's sensitive, Sara. Go easy on him."

"Sure. Sure."

As I neared the kitchen the liquid got warmer and warmer. Inside, the temperature was definitely hot. It was clear that I wouldn't be able to approach Vic's output port without getting scalded. "You know, you just blew this year's water ration," I started. That was the wrong tone. I needed a calmer, firmer approach.

The room was a sauna; I wasn't going to last long inside. "Vic, I don't want any more soup. It was kind of you to make it, but would you please stop now?"

No answer.

"Vic, you and I have had our differences, but by and large I've treated you well. You get your monthly checkouts with those nice exercises for your logic gates...."

"Forget it, Sara." Ewald, his arms and belly glistening from spattered soup, was watching me from the hallway.

"He's gone silent on us, Ewald." I sloshed out towards the boy. "He's never done that before."

"Listen, Sara," he said in his wise ten-year-old voice. "You've got to

learn to treat C.I.'s right. They have needs that most folks don't understand."

"Needs? And what's a C.I. anyway?"

"Cyber-intelligence. That's what the Wik'rets call them."

"I suppose the Wik'rets can explain how this happened."

"Not exactly. But you know how the screen is so close to the kitchen. He hears a lot of things that don't make much sense to him."

"Things like Wik'ret nonsense, you mean. He's been listening in on the 'casts."

Ewald looked flustered.

"All right. So he heard some alien philosophy. That's no excuse..." I was staring at the bathroom door just then. "The drain!" I shouted. "We've got a drain in the bottom of the tub!"

I flipped on the bath light and saw to my disgust that the soup level was *above* the lip of the mummy-case. I was sure I'd left the drain open.

"Maybe the bread is clogging the strainer," Ewald suggested.

I reached down, dipped to my shoulders in soup, and fumbled for the controls. The drain was open and the strainer had caught only a few pieces of mush. "Vic's turned off the sewage. That, or enough bread oozed through to jam the works. There's nothing to keep the level from rising."

I turned, but Ewald was already gone. "Ewald?" I found him in his room, starting to move his most-

valued belongings onto the top shelf of the closet. He was unfastening holoposters from the wall and rolling them up. I felt sorry for him, and helpless.

"You'd better do the same," he said. "That repair crew might not get here 'till morning."

"Get here? How exactly will they get through the door?"

"I don't mean *here*. I mean into the plumbing. They'll have to get the emergency drain unplugged first."

Emergency drain! I'd Forgotten about that. I tried to remember where it was. There was a place in the middle of the rug where I'd put a balloon chair to cover the grating.

"Sara."

I was gone too fast to hear his comment. The chair slid out of the way and I was up to my shoulders again fingering a useless drain. "Sara, I could have told you that," Ewald said as he came out after me. "It looks like Vic's trying to act like a guardian."

"What's that?" The seat of the chair I'd moved was just barely above sea level. I sat down in it anyway, exhausted. "What's that about a guardian?"

"You know there's the cutoff — the controll that protects us against sewage backups. He's taken it over, but somehow his logic's inverted and he's keeping stuff in instead of out."

"Why? What's gotten into that silicon neurotic?" I threw my head back against the chair. It felt good to have something to knock against that couldn't complain.

"It's the Wik'ret program, I think." Suddenly his expression brightened, as if he'd just solved a 3-D crossword. "He's afraid he'll be replaced," he said excitedly. "That's it. He thinks he won't be needed after the Wik'rets come."

"Why wouldn't we need him?"

"He's confused. You know the Wik'rets talk about different levels of Cyber-intelligence ... maze-runner, errand-runner, guardian, teacher, revered one."

"Hold on. Explain." I stopped beating at the chair. "Maze-runner, I understand. Errand-runner must be something like ummm an income tax machine. What about the others?"

"Vic's beyond errand-runner but far from being guardian. I think that's his trouble. He wants to move up, take more responsibility. That way he'll have better job security."

"Move up? To *revered one*? Are you saying that the Wik'rets worship autochefs?"

"You can't call it worship exactly. And they aren't autochefs. It'll take Vic a long time to get that far."

"Oh no. Oh no." I closed my eyes and tried to remember if life ever had been simple. Once, when I was six, I smashed my dolly because I didn't like the way she talked back to me. It was an awful sight: the broken innards, the VLSI pacs clinging to the fragments of circuit board. My mother punished me by not letting me clean it up for a week.

"I can't think about it," I said. I

went into the bedroom and started to work on the closet. Some of my gowns were already dragging their hems in the broth. I rescued those I could. I opened drawers and took out sweaters I hadn't seen for years, and undergarments so long out of style I didn't remember what they were good for. I tucked up the drapes.

As I worked, I heard Ewald trying to coax Vic back to life. He was talking solemnly about the Wik'rets' admiration for all forms of C.I., and about their views on the importance of collaboration between organic and inorganic intelligence. The words made little sense to me, but I couldn't see harm in letting Ewald try.

"Sara," I heard him shout after a long while. I turned to find him soupy past his chin, but smiling.

"I'm getting somewhere with Vic. He's answering me."

Suddenly, I had a sick feeling in my knees. "Watch what you promise him, Ewald. You can't make a kitchen robot into a seer."

"We can make him into a guardian. It's just a matter of education. He has a confused notion of what humans are all about."

I stopped my pointless diddling with the curtains and pushed back into the hall. There was a new noise from the livingroom, a low metallic rumble.

"The drains are open," Ewald said. "See, the level's dropped already."

I started towards the kitchen.

"Sara, be careful." He waved me

back. "He's adjusting," he whispered. "Don't upset him."

"Okay. Okay." I couldn't help myself. I had to talk to him.

"Good morning, Sara," he said in his usual cheerful voice. "Sorry to see you out of bed so uncommonly early."

"It was just a matter of too much *sopa de ajo*."

"I'll be more careful in the future, Sara. Would you like something special for breakfast?"

"Later, Vic. Thanks, but later." I turned to Ewald. Was it possible that he was right, I wondered, as I looked at his widening smile. Were the Wik'rets really going to come?

"We have to spend more time with Vic," he said. "I can straighten him out about the broadcast stuff, but you have to help with other things. Teach him a lot he doesn't know about humans so he can learn to be more valuable to us. Then he'll feel more secure."

"Ewald!" I could see that the poor fellow was starting to yawn.

"Yes."

"Listen, do you think I could call you Wally sometimes? I know Ewald has a nice Latin ring to it but it's so formal."

"Sure. Sure. Wally's all right. But you ought to learn to do this..." He grinned broadly and tapped his head in the "harmony of the spheres" gesture.

I tried to imitate him.

"Grin more," he said. "That's it. More, mom ... uh Sara ... uh mom. That's it."

Films

BAIRD SEARLES



THE BUCK FLOPS HERE

Regular readers will remember that I've blown hot and cold about the current incarnation of Buck Rogers. I found the pilot (given theatrical release initially) amusing and unoffensive in its cheerful lackwittedness. The first few shows of the first season *did* manage to be offensive for that reason, but somewhere along about the fourth one things began to look up, and for the rest of that season things rolled along with good fun, rousing derring-do, and neat, if not all that gaudy, special effects.

Given the general messy beginning of this current season, mercifully over by the time you read this, the second season for Buck started very late. The opening episode, "Time of the Hawk," was a two-hour epic, and one immediately became aware that there had been some changes made, and not for the better.

The plot frame is now that Buck and Wilma (a lady I grew to like quite a lot last season) are aboard a huge starship, which seems to have an interior decorator working on it who had specialized in Tudor castles and Pentagon hallways. This ship is boldly going to find abandoned artifacts of humanity, the ten lost tribes of Israel, or something on that order. In any case, it is on a *Quest*.

And there are new characters, trala, such as a dear old fuddy-duddy of a scientist (the everlasting Wilfrid Hyde-

White), one Admiral Asimov (hmmm), and an insufferable new robot named Crichton, who when told to do things, makes remarks to the Admiral about that overweening ancestor of his and his laws of robotics (hey, there, folks, an in-joke, nudge, nudge).

Buck and Wilma are also a little remodeled. The former is wearing his hair longer, which adds about 20 pounds to the look, which his near blimp-like charm doesn't need. She, in the meantime, has gone back to brunette, and in this episode was all dolled up in what seemed to be a kiddy's turn-of-the-century sailor suit. And all of this is being guided by something called the Galactic Council that sure wasn't there last year.

The plot of this installment, which seemed endless because they were padding like mad to fill two hours, had to do with some antisocial types who were raising Cain in a particular area of the Galaxy. Ah, but it turns out that they are the last survivors of their race, avian humanoids with wings. You know they're really good guys, and after a lot of back-and-forthing, battling, rescuing (from mutant tarantulas, yet), and moralizing, the female buys it and the male, who is called, with staggering originality, Hawk, decides to join the expedition in hope of finding others of his peregrinating people.

So now the ship has a resident alien, without which no bold going is complete. The role of Hawk is played

by Thom Christopher with all the vivacity of a vulture sitting on a dead tree.

In another episode, our intrepid trio zoom down to the surface of a somewhat mildewed looking planet which seems to have a population of two. One is a sort of ambulatory wooden mummy that looks like a combination of a rotten log and what you'd find *under* a rotten log; the other is that type of young lady who runs around the woods in a drapery, trying to evoke Rima, the bird girl, and coming across more as Rima, the birdbrain. She, of course, has no memory of how she got there. It turns out that the mummy is really a potential daddy, since its singularly unattractive physical persona is simply a stage he's going through, a sort of larval stage out of which pops a young man who is no great shakes, but nevertheless a vast improvement. Apparently these two are going to repopulate their world. Urgh.

So, as our ship sinks slowly into the west, we bid farewell to Buck Rogers and the 25th century, which seems to have been done in by a case of the second-season sillies.

Now, from the riblime to the sub-diculous, I am going to speak heresy. The much talked-about and much-admired British radio series, *The Hitch Hiker's Guide to the Galaxy* began broadcasting in my area some weeks ago. I had deliberately avoided the book and the record, being a purist

about judging a work in its initial medium. I was excited about it, not only because of the good things I'd heard, but because so far as I can remember down the dim years of this column, it will have been the first work for radio to be reviewed here, and I had spent a good chunk of my life in the 1960s producing science fiction and fantasy for that medium on Pacifica Radio.

For those whose air waves have not been host to THHGTTG, it is a satirical odyssey of the picaresque (and is it picaresque!) adventures of a young man who is fortuitously picked up by a flying saucer seconds before the Earth is demolished to make way for a hyperspatial express route. Arthur Dent, for such is our hero's name, is accompanied by a friendly alien who has been on the Earth (in the sense of on the beach) for some time, and what can only be the ultimate *vade mecum*, an electronic book entitled *The Hitch Hiker's* etc.

Arthur is shuttled from post to pillar, running into all sorts of outré people, places and things. From my own technical background, I can say the series is well-produced, moves right along, uses a lot of up-to-date science fiction concepts. My problem? It's not very funny.

Humor is the hardest thing to analyze or explain of any of the literary phenomenon; it seems to follow no

pattern as to what works with whom whatsoever. I do think of myself as having a sense of humor; I've been known to laugh at Grant/Hepburn movies, Skinner essays, *New Yorker* cartoons, early *Saturday Night Live*, and most of Monty Python and M*A*S*H.

But I don't find that much of THHGTTG funny. A lot of the humor is based on contemporary cliché grafted onto extraterrestrial situation: "The Vogans have as much sex appeal as a road accident," and "Excuse me for breathing, which I don't do anyhow" (the latter being delivered by a morose robot in the accent of Boris Karloff) are lines that just don't amuse me; ditto such whimsies as the triple-breasted whore of Eroticon 6 and a smartass computer with a New York accent.

A truism of s/f writing is that the plot must grow out of the science-fictional elements. I think this must be also true of s/f humor (primitive but ideal example: the antic Tweel in Weinbaum's "A Martian Odyssey;" also Joanna Russ's "Useful Phrases for the Tourist" or Tanith Lee's manic alien animals in the Sapphire Wine duo).

But, with humor, it's always chacun a son ghou, as Burke said to Hare.



C.A. Cador ("*The Shadowed Waters*," April 1980) and Marc Laidlaw, who writes that he is a student at the University of Oregon with sales to *Omni* and *Year's Best SF*, offer here a tale about a musician and her search for a comrade in a city that is oddly changeable and always dangerous . . .

Bait

BY

C. A. CADOR and MARC LAIDLAW

Damiol had not returned....

Am'horok had somehow swallowed him. The Order had sent another in his place; if she failed, another would be sent after her. That was the way of the Order.

The sun beat down on her headcloth; the road's dust clogged her nostrils. Behind her, the bell on her pack pony's halter jingled lonesomely.

Jessany stood for a moment on the top of the rise, looking across the thorn-tree studded waste toward the grey-green bulk of Am'horok. She felt her belly tighten at the sight, thinking of Damiol and the baby that might now never be. Then she exhaled slowly, letting the tension drain from her. *I serve the Order. I have only my duty.*

Goron had sat in his chair, stroking his white beard with one hand, smiling sadly. "I am sorry it is you we must send to Am'horok. Your love for Dam-

iol may make it hard for you, if he still lives. But remember: help him if you can, but only without jeopardizing your mission.

Calm again, she studied the place, trying to tell herself that it was just a place like any other. But in the back of her mind a voice whispered that Damiol was five years her senior, and Order-born as well, and had failed.... *I at least am ready.*

She shrugged and started down the hill.

The road was baked and broken for a distance, and so she kept her attention on it. When she looked up again, Am'horok had grown, dominating the landscape. There was something disquieting in the contrast between its seeming lushness and the near-desert that stretched for miles around. She could see the gates now, shadowy mouths that seemed to breathe damp-

ness out onto the parched road.

Ahead of her a caravan of blue-veiled nomads were making camp in the scant shade of a thorn thicket. Salt-sellers. They watched her approach, dark eyes narrowing between blue borders. She could not tell the men from the women; all were veiled and gowned in rough dyed cloth. All wore various weapons, as well: daggers of polished thorn, metal swords that must have cost them dearly.

Several blue figures rose from a small cooking-fire as she approached. Jessany slowed and stopped, raising one hand to meet the nomads' salutation.

"Have you need for salt?" said one with a man's voice.

She shook her head. "I've plenty, though I thank you for your thoughtfulness."

"The sun is hot and will quickly take what you have."

Jessany half smiled. "Ah, but I'll soon be out of the sun." She gestured toward Am'horok. "And I trust you've sold them enough already that I can purchase it there if necessary."

"Sell salt to Am'horok?" The man laughed without altering his gaze. "They have no use for our salt. Am'horok has all it needs in deep caverns. Or so they say." He blinked slowly. "No, we simply travel this road. We never deal with that city."

"Have you ever been inside?" Jessany asked.

The nomad regarded her with silent

eyes. "Once," he said. "We do not like cities." He turned and walked back to the fire.

His companions, as featureless as he, stared unfathomably at Jessany for a moment. Then they, too, strode back to their fire. She said nothing until the voice of her pony's bell reminded her of her duty. Beyond the nomads' black tents, Am'horok waited. She was not eager to move on.

It was still some quarter hour's walk away. The road widened and smoothed as others joined it, like rivers flowing toward the sea. It grew busier, too. Carts swayed and creaked their laborious way into or out of the city, and small groups of riders passed her several times. The road was fouled with droppings.

As she approached, she could see that what had looked like city walls were really the blank outer walls of massive buildings, and the gates simply the few streets that opened on the outside. Inside she could see carob trees and a faint glint that could have been the sun on still water.

It looks almost pleasant, she thought; but the streets between the buildings' bulk were in deep shadow, and the buildings themselves seemed graceless and curiously ill-proportioned.

She could feel the humid breath of the city now, and smell it as well. She wrinkled her nose at the stagnant smell of the place, a mixture of human by-products, spices, and stale incense.

Shouts and curses clamored at her ears, some in languages she had not expected to hear in this region. *Travelers*, she thought. *From beyond the dead lands.*

Stepping into the city was like stepping out of the desert sun into the cool dampness of a wellhouse.

A constant movement of shapes, dim and unresolved, stirred the shadows before her. As her eyes adjusted to the gloom, Jessany realized that she was in danger of being swept away by the tide of traffic. Huge wagons rumbled by, trains of pack animals, laden with foreign goods. And faces: pale and dark alike, from more regions than she could count. *Am'horok runs with water, and everyone comes to drink.*

Someone jostled her elbow; instinctively she reached down for her purse, finding a man's hand. Expertly she broke his little finger, drawing her dirk as she whirled to face him. She smiled into his eyes as the pain registered, and his face turned a deeper grey than the stone of the beshadowed walls.

She released his hand. The man stepped backwards slowly, eyes fixed on the heavy knife in her hand like a mouse watching a snake. Suddenly he spun and was gone into the throng.

She smiled benignly after him. *Not good enough*, she thought. *He needs practice.* Even so small an opportunity to assert herself against the city had been most welcome.

She sheathed the dirk.

Not far down the street there was

an inn. She led her pony through the opening into the walled courtyard. A tattered boy of about fourteen emerged from the stables at the court's left and walked toward her, hands outstretched for the reins. She gave them over to him absently, examining the long wall of the inn. Dark glass windows, smeared with inner light, sided a scarred wooden door. At the second story, smaller and thicker portals cast dull reflections.

"There are rooms free, I trust," Jessany said.

No answer. She looked down at the boy, suddenly aware that he was watching her intently. He started as she caught his eyes, and looked away quickly with a curious expression.

"Is something wrong?" she said, frowning.

"Plenty of rooms," the boy said, ignoring her query. He turned and started to lead the pony away before she could speak again.

"Just a minute!" she called after him. He froze as she walked to the pony. "There are a few things I want with me."

The boy stood in patient silence while she disengaged the embroidered bag that held her kitor, and the plain leather pack in which her spare clothes and such other valuables as were not on her person were stowed. "There, now you can take him, and mind you take good care of him." She draped one bag over each of her shoulders. "I'll be in to see him shortly, and if any-

thing's wrong I'll have your kidneys fried for dinner."

The boy nodded slowly, then turned back toward the stables. Through a tear in his shirt, Jessany saw the angry red scars of a recent whipping.

She started toward the inn door, aware that she still carried her thirst from the desert. *If only I could allow myself to drink some ale — but it would be too dangerous. I've got to stay alert.*

Inside, the gloom of Am'horok was deepened by clouds of smoke; lean men puffed pipes, drinking at the long battered tables; oil lamps burned sootily, flickering along the walls. The ceiling was low and unraftered, a solid surface of stone. *Alien work*, she realized. The inn, like most of Am'horok's dwelling places, had been built around some older structures, rudely shaped to the purposes of men.

A stout man, haired thatched and greying, came toward her. "Lodgings?" he asked.

Jessany nodded. "I am a musician."

The innkeeper frowned. "We're already putting up three," he said irritably. "I can't afford to...."

"I sing and play the kitor. I was a student of Kahayn."

"Kahayn?" The man's eyes widened. "Well, I must hear you play before I can promise anything. But I'll see what can be done." He smiled abruptly. "But, here, have a seat and we'll prepare a room. Care for food and drink?"

"Food," she said. "Something fresh. I've been in the desert for a week, living on jerky."

"I've just the thing," the innkeeper said and hurried away.

Jessany sat at one of the long tables, opposite two men who were intent on a game of chess. Setting her bags on the bench beside her, she cast her eyes around the room. *I wonder if Damiol stayed in this inn. It seems to be nearest the gate he would have entered.*

She looked intently around the room, examining the mixture of humanity it held. The two chess players were Hadaki from the eastern hill country; a bit farther down the table, three dour Gergons glowered into their beer. The room buzzed with languages even she had seldom heard. *Wish he would hurry; I need to be alone to try mindsearch for Damiol, and I need to eat first.*

As if summoned by her thought, the landlord appeared at her shoulder with a bowl of fragrant stew and a flagon of ale.

Jessany eyed the ale with longing for a moment, then said, "Best I not drink more than water, If I'm to play for you, empty as my stomach is. But the stew smells —" she inhaled deeply "— fit for the gods."

The landlord shrugged. "I'll get you some water, then, if you're sure...."

Jessany nodded. "Please." She untied her headcloth and smoothed her hair into place. It was auburn, cut

short at the neck for convenience. *Never eat at once when you're hungry.*

She eyed the stains and smudges on her white traveling robe with distaste. *Best I change into something else before I sing for him, or he'll not take me seriously.*

Now at last she judged she could let herself eat; she was still chewing the first mouthful when the innkeeper returned with her water.

"What brings you to Am'horok?" he asked, eying the fine kitor that she had moved to the table before her.

Jessany took a long sip. "What brings anyone to Am'horok?" She gestured with the mug, its contents sloshing. "Water. I could smell it all the way from Pavitaan. To drink, to bathe in, to water crops with. Do you know how the rest of these lands are faring?"

"We've underground springs, that is all."

Jessany nodded. "In any case, where there is water, there is money for musicians. In the dead lands, no one has time to listen to songs."

"Well, we'll hear your songs shortly." He put a hand on her shoulder. "Now excuse me. I appear to have more famished customers."

He walked back toward the kitchen, and Jessany watched him guardedly. *I wonder if my duty will require his death, she thought. There is no telling what may happen, who may die. Even I might not escape Am'horok with my life.*

She did not think of Damiol. Her

own life she could bear to lose, for it was inevitable and would happen abruptly. But Damiol's life ... and that other, yet unfulfilled....

She had only to shut her eyes to see Triel's old gentle face, and hear her voice saying: "The Order serves humanity. Not individuals, but the survival of the race itself on this world. That is a cause greater than your life, or mine. For it you may kill; for it you may die. What matter, weighed against the lives of all our children's children, forever?"

That is my service; there was a touch of pride in the thought, masking something colder and infinitely more remote. For that I was trained, for that I live. Suddenly she felt very old. Our children's children....

She drained her mug and stood up. *Best check the pony now.*

Out in the courtyard again, she spied the boy who had taken her pony; he was cleaning an empty stall. She called to him, beckoning him from his task. "Where's my pony?"

The boy pointed to a stall several yards away and followed her to it. The pony had been brushed and fed, its tack cleaned and slung from hooks on the wall.

"Did you clean his hooves?" Jessany demanded, adopting a gruff tone.

The boy nodded, hurrying to lift one rear leg so that she could examine it.

"Good," she said. Her face softened into a smile. "What's your name?"

His previous odd manner had vanished into typical boyish humor. "Yh'harne," he said.

"What sort of a name is that?"

He shrugged. "What's your name?"

"Jessany," she said.

"What kind of name is that?"

She laughed, reaching into her pouch for a coin. She handed it to Yh'harne, who hardly seemed to notice. He was watching her with his earlier expression: intense interest, and something else that she couldn't identify.

"Where are you from?" he asked.

"All over. I play the kitor and sing old songs."

"Why old ones?"

What a strange child. His questions are more subtle than those of most adults.

"No one writes many songs these days," she said softly.

"Why are you in Am'horok?"

Jessany laughed. "What business is it of yours? How does one so young have so many questions? They're supposed to come with age." She paused. "For instance, I have some questions that perhaps you can answer."

Yh'harne's gaze remained steady. Jessany looked quickly to either side: no one in sight. She reached into her pouch and withdrew an ornate metal disc, a medallion. Damiol had had one like it, and if....

"Yh'harne!" The voice had come from the murk of the farther stalls. Jessany saw a dim shape approaching and put the medallion back in her pouch.

"Someone's calling," she said and glanced back at the boy.

He was staring blankly at her pouch, face suddenly pale. Jessany's heart thudded. *He recognized it!* She started to reach for him, but he was already turning and running toward his employer. Jessany could only stare after him, numbly, for several moments. Then she turned and went back toward the inn.

She had been shown to her room, stowed her possessions, and washed the dust of the road from her feet in the inn's bathhouse. Now, refreshed and clad in clean clothes, she could at least attempt a mindsearch.

She barred the door of her room to insure her privacy; she needed no questions. That done, she began.

She sat in the center of the room's floor, a cushion beneath her, and began slowing her breathing until it was almost imperceptible. Slowly, muscle by muscle, she relaxed every tension from her body while she repeated the litany of Silence in her mind.

Silence is the greatest strength of the wise

Silence is the surest refuge

Silence holds the purest song

Silence teaches the deepest truths

Silence is the voice of the Order

Thirty-six times the litany sounded in her head; then it was replaced with

with the name of Damiol, mentally intoned over and over as she spread her consciousness out through the city, questing for him. She was almost ready to give up when she felt the faintest flickering at the very edge of her awareness. Quickly she closed in on it. Faint it was and faint it remained, try as she might to focus. Finally she broke trance, bowing and repeating the ritual phrase under her breath: "I serve the Order; the Order serves humanity."

He is alive, at least. The knowledge sent a quickly repressed wave of relief flooding through her. *But probably just barely. He's certainly not conscious.*

She wiped the dripping sweat from her brow on the sleeve of her blue tunic; the light cotton felt cool against her face.

A sudden rap sounded on the door, followed by a loud rattling as someone attempted to open it against the bar. *Good thing I barred it.*

"Just a moment," she said, rising. She returned the cushion to the bed, breathed deeply several times to clear herself, and lifted away the bar. The door opened to reveal the innkeeper, looking vaguely puzzled.

"I was dressing," she said. "You should be careful of entering so suddenly."

"My apologies," he said, slightly irritated.

Better not upset him, or he might decide I'm one musician too many. Jes-

sany smiled. "Did you want something?"

"The dining room is full, and we had hoped for your music. If you are not too busy...."

"Not at all!" It would be good to forget the mindsearch for a while. "Let me tune my instrument, and I'll be right down."

"Fine, then." The innkeeper bowed and left, and she closed the door behind him. Her instrument was tuned, but she had one more thing to do before leaving the room. She took the medallion from her pouch and regarded it for a moment in the room's dim light.

If I'm caught with this, and anyone recognizes it as the twin of Damiol's, I could be in trouble. I got the response I needed from that boy; there's no point in keeping it around.

She looked around the room, finally resting her gaze on a rectangular planter, overgrown with bulb-leaved mosses and delicate white blossoms. As expected, the earth in the planter was so caught in the network of roots that it lifted in a single lump. She put the medallion in the bottom of the planter, then replaced the soil and vegetation over it.

Safe at last, she thought.

Taking up her kitor, she left the room and headed down the hall. This second story had been built by men, constructed atop the older alien structure. A hole had been carved from the original roof, through which sturdy

wooden stairs led down to the low-ceilinged hall below. Jessany made her way down through the busy crowd, guided by the innkeeper to a stool near the fire. He brought her a mug of water and a platter of fresh fruit, which she partook of as he shouted for momentary silence in the room.

"Visitors, we are honored this evening to have with us a rare treat — entertainment from a pupil of the kitor-master Kahayn!"

There was light applause and a few rude comments. Someone wanted to see serpent-dancers. Jessany only smiled, shifting the kitor into position, and began to pluck and strum the seven silver strings. The diners returned to their meals, but the room was far quieter than before. Jessany sang, and it fell quieter still. She sang old songs, her eyes probing the depths of the room, fascinated by the assortment of foreign peoples.

Old songs. Yh'harne was right. The world needs new songs. Perhaps they would help us start living again.

She stopped on a glittering series of strummed chords, and the room roared approval. Jessany acknowledged it with a nod. The Order had seen well to her training; none outside it knew that Kahayn herself was a Sister.

Few of its members were known as such; no more than one in ten. Nor did those outside of it know nearly as much about it as they thought. That was the way of the Order, secretive

and wearing many masks. It had worked well on many worlds before ever there had been humans on Niilaiya. And now it was the only thing that kept the humans of this world, isolated for centuries from the rest of galactic civilization, from descending into barbarism, overcome by the harsh environment and the strange legacies of past alien colonies. Niilaiya was a mysterious world....

When the applause had died sufficiently, she plucked at the strings; as she had thought, one had slipped a trifle out of tune. She tightened its peg ever so slightly, then plucked the string again. *That's better.*

She struck a single note, repeated it once, then again and again, faster until her fingers seemed to blur. The note broke into a chord series that ended on a flashing arpeggio, and then she began to sing, playing on the kitor not an accompaniment but a countermelody that wound its way around the song as if they were lovers. She sang of an old feud that had drowned a valley half a world away in blood, the kitor entwining around her words, ever wilder and faster. Suddenly her fingers ceased their motion; pure and alone her voice sang the last line of the song into the aching silence: *"The gods give men love, but never pity."*

She looked out over the room as one last chord closed the song; a man dressed in the fashion of Durocora, where the song was set, was staring at her, tears running down his cheeks. In

the doorway, Yh'harne stood, his eyes wide with wonder.

She stood into the sudden storm of sound that broke the silence: hands clapping, feet stomping, men and women calling. She shook her head as she bowed slightly in acceptance, as if she were a queen receiving the homage of her subjects.

The landlord advanced on her wreathed in smiles; she could almost see the visions of the business she would bring him dancing in his head. He clasped her elbow in his greasy hand. "Two silver pieces a day and free food and lodgings for as long as you stay, if you play every night."

She pretended to consider his offer for a minute, then gravely gestured her acceptance. Carrying her kitor close against her breast, she made her way through the crowd back to her room. There, she replaced it in its bag and sat, considering what to do next.

Perhaps if I go out into the city, wander about a bit, I can get a clearer idea of where he is. I am to find and save him, if I can do so without endangering my purpose. There is a taint about this place, the Order was right about that; it must be dealt with. But first, I must discover what it is. The old ones are subtle in their evil.

She rose and drew a cloak around her. It was nearly dark now, and with nightfall she knew that Am'horok's mists would grow chill. It was hard to imagine that she had been in the desert only hours before.

Downstairs, the crowd's eyes followed her from the stairs to the door; whispers nudged themselves through the room. Jessany stepped outside, drawing her cloak and her dirk closer to her, wary of the deepening shadows. The last traces of daylight floated overhead, slowly clotting into darkness.

Traffic had slowed to an irregular trickle in the streets beyond the courtyard. Most of the movement was that of men, wandering from tavern to tavern, singing and swearing. *Fresh from the desert, no doubt. Glad to ease their thirst. Am'horok keeps its promise ... but what does it take in return? Damiol, perhaps, has found out. If I find Damiol, I too may know.*

For the first time she noticed the means by which Am'horok sustained itself, entirely self-contained. The buildings of the outer wall rose upward in slanted tiers, joined at levels by ramps and ladders. Across these tiers, spilling down from one to another, was a profusion of plantlife: shulk and corn, varieties of fruit trees, a seemingly endless mass of food. Such buildings surrounded Am'horok, ensuring its nourishment.

She headed away from the gate she had entered that afternoon, pressing on into the city. Am'horok was built, it appeared, in concentric rings of buildings, wide streets separating each ring. Most of the shops and residences faced these streets in a continuous wall, only occasional transverse streets leading

through to the next ring. The effect was labyrinthine, and Jessany soon hoped that she would not get lost on the way back. Fortunately, even with complete darkness the streets remained busy: lights and carousers alike spilled from the numerous noisy taverns.

Wonder if I'm getting closer to Damiol. I wish I could find somewhere quiet to try another mindsearch.

At last she stopped at a wide round fountain; after dipping her hand to drink from the cold wet surface, she sat on the smooth stone rim and listened to the city. Its buildings rose blackly around her, as ancient as the night sky overhead, in which stars had begun to shine blurrily. She noticed for the first time that the buildings' surfaces were seamless, as if they had been carved all of one piece, millennia ago. The recent human additions seemed almost haphazard beside them, parasitic. Something about it disturbed her, in the way the city had taken so easily to the human intrusion. It was almost as if it had been built for such a purpose: blank frames on which men could impose their own elaborations.

Ridiculous. Jessany dismissed the thought. *They had no way to know we were coming. Besides, they were few enough, and aliens here as much as we.*

Jessany became aware of a low, constant muttering in the shadows across the street. Peering more closely, she detected a cluster of figures, shrouded in vaguely luminous smoke, chanting. *Oimos addicts*, she realized.

A slow grin came to her features. Glancing about, she saw that the street was otherwise mostly empty. She hurried over to the clouds of pale smoke, where the oimos smokers clutched their pipes with half-closed eyes, muttering the mantras of their peculiar religion. At the end of the line of smokers, beside a ragged black-wrapped woman, Jessany crouched down against the wall. No one would notice her here, even silent and without a pipe. And she was basically alone: the smokers were in a place far from An'horok.

She closed her eyes and cleared her mind and once more began a mindsearch. In a moment, she could no longer feel the ground beneath her; then the chants of the addicts faded away. Mentally, she reached out for the faint trace of Damiol that she had felt before, hoping that she had not passed farther from it.

She found it immediately, stronger this time, though still quite tenuous. It was apparent that even though she had come closer to him, he was slowly passing away. What was happening to him?

The trance ended without further revelation. Jessany rose again, rather exhausted by her efforts, and started back for the inn. She knew that Damiol must be near the city's center and that was enough for tonight. *I could use a good night's sleep. Who knows when I'll get another. Now, if I can only find my way back.*

Her return took her no little time. The streets were unmarked, but out of her Order-trained memory she was able to dredge sufficient data to reconstruct her route and follow it in reverse.

In the courtyard she saw the boy Yh'harne lounging against a wall. She beckoned him over.

He bowed awkwardly. "Yes, Lady?"

She repressed a smile. "My dagger needs sharpening. Fetch my whetstones from my pack, please."

"At once, Lady."

"No, not now. I have something else to do first. A little later ... bring them to my room."

The boy was surprised. "Yes, Lady."

He was expecting me to want to talk to him; I think he was waiting for me. Aloud she said, as he turned away, "And call me Jessany."

"Yes, La — Jessany," he said over his shoulder.

The innkeeper headed straight for her when she walked through the door, smiling greasily. "One moment, Lady, if you please. A delicate matter...." He coughed into his meaty fist. "Several important people were here earlier, when you sang, and each would pay handsomely for the privilege of spending the night with you...."

Jessany waved him into silence. "I

doubt it not. But I think I would prefer to do without both the handsome fee and their attentions."

His face fell.

"However, now that you mention such things...." A sudden idea had awakened in her head. "That stableboy of yours, what's his name?"

"Yh'harne?"

Jessany nodded, smiling ever so slightly lewdly. "Yh'harne it is. I have taken a liking to him. I'll pay you three coppers a night for his company." Her carefully fabricated smile broadened. "I prefer my pleasures a bit less ... sophisticated."

The innkeeper spread his hands. "As you wish, as you wish."

A pitcher was waiting in her room, brimming with fresh water. A mug stood beside it on the little table. Gratefully she sank into a chair next to it and filled the mug. She drained it at a draught.

In a little while, there was a hesitant knocking at the door. She got up and opened it, letting Yh'harne in.

"The innkeeper ... he...." The boy seemed unable to make up his mind whether to be terrified or eager. So he had settled on both as a compromise. "He told me that you ... you were paid — paying him to ... sleep with — with me?"

"So I am. It's cold in here, after the desert, and I thought you might make a good bedwarmer. Easier to talk to, maybe, than one of the inn dogs?"

The boy looked bewildered. "For th — that you could have had a wa — warming pan brought in."

"Yes, but they make terrible conversation." She smiled at him and motioned to the chairs.

He sat. "I brought your whetstones." He looked more than a little disappointed, and hurt.

She hadn't really thought of that. *He's probably never been with a woman.* "You recognized the medalion I had earlier; where from?"

The boy's face brightened; he hesitated only a moment. "Someone who stayed here a while ago had one like it." His voice trembled with repressed excitement.

"Was his name Damiol?" She explained hurriedly: "I bedded him once, last year. When I got up the next morning he was gone, my purse with him — and the mate to that medallion."

The boy looked offended. "You don't need to make up stories for me, Lady. He told me you would come — not you, but somebody — before they took him away."

"Who took him? Where?"

The Lord's men. I tried to help him get away, but they caught him. They weren't sure it was me that helped him, or they would have killed me. But they weren't sure, so they just gave me this." He turned his back to her and lifted his shirt over his head. His back was covered with the scars of the whip, curling around his flanks toward his belly and chest in a crisscross pattern

of ridged and twisted flesh.

Jessany winced at the sight. Grown men had died from less. Suddenly she felt an overwhelming tenderness for this boy whom she might well destroy. "Where is he?"

"In the Lord's house, at the heart of the city."

"What have they done with him?"

Yh'harne shook his head. "I don't know. They take people there every so often, and they don't come out. That's all. The Lord keeps them. They say it has something to do with the city."

Jessany considered that for a moment. "This Lord, what is his name?"

The boy shrugged. "I don't know. Nobody does, I think. He's always been just the Lord."

"Always is a long time," Jessany said softly.

"Since my father's father's youth, at least. He is the Lord; he does not die. They say when the drought began, and men came here in search of water, they found him here waiting."

"Have you ever seen this Lord?"

The boy nodded. "Once, when they whipped me. The Lord was there then. His eyes were so old, and so cruel...." Yh'harne shuddered involuntarily.

Jessany reached for him, stroking his tangled black hair with her hand as one soothes a frightened animal. "You've done well, Yh'harne. But why?"

The boy looked at her steadily. "I liked Damiol. He was kind to me, gave

me money to do errands for him. He talked to me about ... about the rest of the world. He was my friend. And you ... your music was so beautiful." He paused. "But who was Damiol? Why do you search for him?"

Jessany looked at the floor. "He was my lover, for six years. This year we were to have a child." *The Order had promised a year's leave so that we could have one....* Jessany sighed. *The boy's telling the truth, no doubting that. And there, I think, is the solution to the puzzle I was sent to solve: an immortal, secretive king in a city of the old ones.*

She rested her hand on the boy's neck. "Perhaps you can be more for me than a bedwarmer. But only if you're willing. Never mind the innkeeper."

Yh'harne nodded shyly. "I'd ... like that."

"Come here." She pulled the boy into her breast, tears coming to her eyes.

The next morning, the innkeeper leered at her over breakfast. "How was the boy? Satisfactory?"

She smiled distantly at the man. "We both took pleasure in it, I think. How did he come by those scars?"

The innkeeper smirked. "He disobeyed an order from one of the Lord's men, nothing more. If the Lady is so inclined, I have access to an excellent selection of whips — though there will be an extra charge should he be too damaged to work."

Jessany recoiled. "I think not. Though there are those I might pay for the pleasure of whipping." She glared at him.

The innkeeper paled at the enormity of his mistake. "Lady, I meant no offense. It is my business to cater to my clients, as you must understand."

She forced herself to smile. "No offense taken, of course."

The innkeeper obviously wanted to end the conversation. "I'm needed in the kitchen."

As she watched him go, Jessany found herself hoping that her mission would cause his death.

She had hardly finished her meal with a soldier wearing a pointed helmet and mail over a black tunic stalked into the inn and sought out the innkeeper.

After a few moments' conversation, the landlord pointed at Jessany, somewhat reluctantly. The man strode across the room to where she sat and bowed stiffly. "You are the kitorist called Jessany?"

She nodded.

"The Lord of Am'horok summons you to play for him. Now."

"The Lord of Am'horok?" she said. "I don't understand."

"Such is not necessary. You need merely procure your instrument and follow me. You will be rewarded for the inconvenience."

This was the same Lord who had taken Damiol, and Damiol had never

returned. Coincidence? There was no way of telling, just yet. Damiol had entered Am'horok as a seller of carved chosk-boles. The rarity of his wares might well have gotten him summoned to the city's heart. *There's no way out of it, I guess. I'll just have to stay on my guard.*

"I'll get my kitor," said Jessany. "It will be an honor to entertain Am'horok's Lord."

She hurried upstairs and gathered her kitor, also secreting a translucent blade of thorn in her boot. They would doubtless take her dirk before allowing her into the Lord's presence.

Outside, the soldier was accompanied by four others who fell closely into place around Jessany. The streets of the city were warming with the pulse of restored wakefulness, but traffic flowed around the armed party without disturbing it.

I'd best memorize the route to this Lord's place. I may be coming back to it alone. She glanced around to fix her bearings, taking as a landmark one of the highest buildings at the city's rim. Jessany soon lost sight, however, of even this structure, overwhelmed by the narrower streets into which she was led. Fortunately, the route was easily memorized, now that she was aware of the city's basic pattern. *It should be simple to find my way here on my own.*

Am'horok's concentric circles gradually grew smaller, until finally the group broke onto a street that sur-

rounded not another wall of buildings, but a single structure. It was of circular construction, an ornate column rising upward into fluted spires, shining with a myriad of dark oval windows. It was entirely alien, its doorways slightly angled, its stairways too strangely proportioned to be comfortable for men. Across the street from Jessany, in one blank wall, was an open portal. No doors had sealed its black mouth in ancient times, and none had been added now. *Strange that there are no guards*

Into this mouth they plunged, immediately entering a series of upward-tending corridors. Jessany's companions said nothing, their armor clattering into echoes in the empty old tunnels. Then suddenly they stopped, turned to her with expressionless eyes. Jessany's breath slowed. *What's wrong now?*

The leader of the guard said, "Give over your weapons."

Ah, Good thing I brought that dagger. She unbelted her dirk and its sheath, handing it to the man.

"That's it," she said. "A musician doesn't have much need for extra weapons." *But a Sister does....*

The guard nodded, gesturing that his companions should remain where they were, only Jessany following. She was led down another length of corridor, around a sudden corner, and through a wide doorway into a chamber.

The Lord of Am'horok sat before

her, in the center of a vast high room. Overhead, diminished light filtered in full blades from numerous tiny windows. A few lamps burned restlessly, casting a cold glow across the seated figure.

Jessany bowed, her eyes on the black-swathed Lord. He seemed entirely supported by his tremendous throne, each of his delicate limbs resting unmoving on the stone surface. His skin was so pale that she could see the faint blue webs of veins beneath it, stirring visibly. He was incredibly ancient and frail, save for his deep blue eyes, which fastened on Jessany with icy power. She felt something inhuman in that gaze.

"My Lord," she said. "How may I serve you?"

She thought that she would have to come nearer to hear his words, but as his lips began to move, some property of the chamber distorted his whispers into an overpowering voice. It was all around her, hardly seeming to come from that bloodless gash of a mouth:

"Play," the voice intoned. "Play and sing the ancient songs, the songs that were here before men."

Jessany's blood thickened at that voice. She began to remove her kitor from its bag as the Lord spoke on:

"Kahayn knew the songs of the old ones — you must know many yourself. Play them and you shall be richly rewarded. I must hear the songs that belong to this city, the songs not of men."

Alien songs, Jessany thought. She knew the ones. As a Sister, Kahayn had learned them from half-deciphered texts and had taught them to her. The kitor was practically an alien instrument, in fact, and thus its extraordinary difficulty for humans to master.

Jessany began to play, unnerved by the very words she sang, the discordant logic of the notes she plucked. Those faceless blue eyes, hanging in darkness, began to bob to the music's rhythm. She was caught by those eyes, caught by the alien music, swallowed in patterns whose slightest insinuations overwhelmed her. They had been here almost forever, before the first colonies, in the distant days when Niilaiya had flourished beneath the hands of different masters, strangers to it too, colonists once as humans had been. Now those old masters were re-emerging. She felt their intrusions, the powerful threat of their return, and for a terrifying instant wondered if the Order were really enough to stop them or even to slow them. Their powers were fast recovering, even as the human colonies deteriorated....

As she played, she grew slowly aware that Damiol was somewhere within the palace, a faint familiar voice amid all that alien clamor.

She had finished one song, two, three — quite without realizing it. The blue gaze had narrowed, then closed entirely, releasing her. The old Lord nodded.

"Beautiful," the voice rumbled. "I

will hear you again tomorrow."

The guard touched her shoulder. "Come."

She was led away, out of the spired palace and onto the street, then back to the inn. In the courtyard, the guard returned her dirk and reminded her that she would be fetched at noon the next day.

"Do not leave Amhorok," he said. "The Lord will be pleased to hear you for many days. At the end of that time you will receive your reward."

Jessany nodded. "I thank him."

The soldier turned and walked away, leaving Jessany to stare after him. *I've been warned not to leave the city. Now let's see if they're going to enforce their 'suggestion.'*

She stepped out of the courtyard, back onto the street, and looked around at the milling throng. There was no sign of guards anywhere.

She strolled along the street in the direction of the 'gate.' The reflected glare from the barren lands burned in her eyes.

As she reached the outer wall, soldiers appeared at her elbows. "My Lady was not thinking of leaving so soon, I trust?" one asked. "The Lord would be most hurt."

Jessany smiled, shaking her head. "No, no, of course not. I just wanted to walk a little more. You know, inside the city it is easy to forget there is an outside."

The guards nodded, but did not depart. At last Jessany turned back to-

ward the inn. *Caught. Now perhaps I begin to know what happened to Damiol.*

Yh'harne was standing in the stable door when she returned to the inn. Pity and fear were writ large on his face. She felt his gaze upon her all the while as she crossed the courtyard.

At the inn's door she paused, then turned around and walked over to him. "It's all right. Come to me again tonight."

The boy nodded, then vanished inside the stable with a noise that could have been a sob. She watched him go, feeling his pain as her own. Then she turned and walked back into the inn. *First some food, then I'd like to go back to that palace and do some reconnoitering.*

She appeared to have lost her way. Though she was sure that she had memorized the path that she'd followed earlier, now the streets she remembered seemed to have changed, abridging her memory. In frustration she made her way back to the inn and tried again, carefully drawing each detail from her earlier progress into the city.

Right along this storefront, good, and then left into the thoroughway there. But where is the thoroughway? Where she remembered an alley, there was a high building, an unbroken facade. She continued along the wall of the storefronts, supposing that somewhere there must be a street into the

next concentric ring. But none came in sight, even though she thought she'd walked the street twice around. *What's going on here?*

At last she gave up and easily found her way outward to the inn. Yh'harne watched her approach from the dimness of the stalls. She met him in the gloom, wishing she could calm his frightened eyes.

"Yh'harne," she said, "you must help me. I tried to get to the city's center along a route I thought I knew well. But I found the streets had changed."

Yh'harne was nodding. "That is how the Lord protects himself. The city ... changes.... You can only get there if your thoughts are ordinary, and if you are of Am'horok."

"Can you take me there?"

The boy looked frightened. "The city would — know. I am already suspected of helping Damiol, my ... Jessany. If I were caught leading you, they would kill me."

Jessany thought a moment. "What if your intentions were, as you say, ordinary? If you didn't know you were leading me?"

"But how?"

She smiled. "Do you trust me, Yh'harne?"

He nodded without hesitation, meeting her smile with a slighter one of his own.

"Would you let me hypnotize you? I could block out all thoughts of me from your mind and send you toward the palace on a simple errand. Then I

would follow you without your knowledge. That way the Lord could read nothing from you. You would be safe."

The boy thought a moment. "I guess ... I would do it."

She placed a hand fondly on his head, leaned to kiss his cheek, and whispered to his ear: "Come to me tonight, as I said, but first I want you to mount up my pony. When you've led me into the city's center, return and take the pony out of town by the near gate. Wait for me outside the city, and I will do my best to meet you. If I don't return by dawn, go away, Yh'harne. Go far from here, out of the desert, and you will be safe." *I wish I could tell him of the Order, but it wouldn't be wise for either of us.*

"What of the innkeeper?" Yh'harne asked. "He will want to know where I am going with your pony?"

"I'll take care of him."

Yh'harne nodded. "I will do as you ask, Jessany." He kissed her cheek. "I love you."

A strange surge warmed her heart. "I love you, too, Yh'harne."

He pulled away, squeezed her hand, and dashed off to complete his chores. Jessany breathed carefully, realizing suddenly that her cheeks were wet. *God, I hope nothing happens to him. Maybe I should never have dragged him into all this....*

She cut that thought off, turning back to the inn. Time to meditate and gather her energies. She knew they

would be tested that night.

That night, the inn's public room was completely full. Word had spread, both of her previous performance and of her summons to play before the Lord, ensuring the attendance of everyone in Am'horok who could crowd into the inn.

She played as she had the night before, finding relief in the clean simple humanness of the songs she sang, after her previous performance.

When she was done, she approached the innkeeper. "I've been thinking. You know, I've taken a liking to that stableboy of yours. It seems to me that I should have a servant of my own, traveling as I do. It would simplify many things for me. Is the boy a slave, or free?"

The innkeeper regarded her calculatingly for a moment. "Neither, Lady. He was indentured to me by his father two years ago. The indenture has five years to run."

"Cheap enough to replace, I should think."

The landlord shook his head. "Not really, Lady. I could buy a slave, but they are costly. Hiring a man is cheap enough at first, but the cost keeps mounting."

"I will pay you for four pieces of silver to buy the boy's indenture." It wouldn't do to seem too eager.

The landlord shook his head again, looking pained. "Twenty-four would be more like it. And cheap at that."

Jessany allowed her face to fall. "I could hardly ask you to take less than the boy is worth to you...." Her voice held just the right tinge of resignation.

The innkeeper looked suddenly crafty. "Ah, but let us not be hasty. I would hate to do anything that might hurt the boy's chances later, and there's no doubting he would learn much more from you than tending horses in the inn."

Jessany nodded slowly. "But I cannot meet your price."

The landlord waved his hand magnanimously. "But you have been selected by the Lord of Am'horok." His grin was unsettling.

"And?"

"So, I would be willing to consider any reasonable offer."

"Eight pieces of silver," she suggested.

"Perhaps twenty...."

"Twelve," she rapped out.

The innkeeper stood rubbing his chin for a moment. *I have been selected by the Lord of Am'horok. Maybe he expects that I won't be needing Yh'harne for long, if I vanish the way Damiol did.*

"Well, it's little enough," the innkeeper said at last. "But the boy does have an immense appetite." He scanned her for any signs of weakness. Finding none, he sighed. "Done, Lady."

Yh'harne will be well rid of this place, anyway. Who knows what might happen to him if he remained? I'll release him from indenture before

this fellow can try to reclaim him and my money. Not that I plan to vanish as Damiol did....

The boy was at the door a few minutes after she entered herself. She opened to his diffident knock. This time he entered without hesitation, kissing her lightly on the cheek before asking, "What is it I must do?"

"Just sit in the chair. I'll put you into a trance so that you can lead me to the Lord's house. Damiol is there."

The boy did as he had been told. Jessany sat in the chair opposite him. "I have bought your indenture from the innkeeper. As far as he is concerned, you are mine now. As far as I am concerned, on the other hand, you are ... your own."

The boy stifled a gasp. "You bought me from ... him?" His eyes shone. "I can never thank you enough."

She smiled, then her face grew suddenly serious. "After you have taken me to the palace, remember, you're to wait for me outside the city."

He nodded.

She caught his gaze with her own, held it while she spoke to him in a low, soothing voice. Slowly he relaxed under the pressure of her mind. When she judged him ready she said, "When I tell you, you will rise from where you sit and walk through the city to the Lord's palace, thinking of some errand on the other side of the city. Then you will return here. You will not notice me

or think of me at any time until you have returned to the inn. To other people you will speak normally."

"I understand."

"Good. Now go."

She followed a short distance behind him, keeping her own mind a careful blank, so that the strange mind of the city would not notice her alienness.

The route was exactly as she remembered it from that afternoon, and at the end of it waited the open mouth of the Lord's house, darker than the night around it. As before, not a guard was in sight.

As Yh'harne turned back to the inn, she stepped into the open corridor and took a few steps up the first staircase; then she ducked into a tiny side room where she judged she could remain undisturbed for a while.

Mindsearch took only a few minutes, as she had expected. With Damiol so close, she could reach much more of his state than before. Slowly she traced the processes of his mind, and was shocked to discover that every thread she followed led beyond him into something utterly alien, something that had escaped her notice because it was so unlike any form of awareness she was familiar with.

With a shock she realized that it was not confined in one place but was somehow all around her, perhaps even aware of her questing.

What has this ... thing to do with

Damiol? she wondered, even as she turned her attention back to him. She felt him stir at her mind's probing, almost as one in deepest sleep rolls over at a touch.

I'm sure I can find him, if only I'm not disturbed. The preternatural silence of the building argued against the presence of any guards, but there was that *other* to be reckoned with.

She followed the threads of Damiol's consciousness up the staircase and along a series of corridors as the sense of his presence grew stronger.

Finally she stepped through a doorless arch into a dark chamber in which Damiol's presence hung like a scent on the air. As if responding to her presence, the room grew slowly lighter, and in a moment she could see Damiol's wasted form lying on a sort of bier in the middle of the room.

There was a helmet-shaped thing over his head, and his arms were stuck full of tubes carrying various substances to and from his body. From the helmet, an intricate complex of hair-slim glowing filaments led up to the room's ceiling, which was covered with banks of glowing lights and emitted a weird high-pitched hum, almost at the limits of her ability to perceive.

A cold metallic voice boomed out. "Kla'aha? At'taha?"

She ran to Damiol's side while the answer took shape in her mind. *The whole city is alive. Am'horok is alive!* She touched her lover's body, feeling the life faint within him, and tried to

summon back his mind.

Instead, she touched the cold mind of Am'horok. But at the heart of that cold, she felt something almost human: Damiol, or what was left of him. *Without him — or someone — the city is powerless, a nervous system without a brain, a body without a heart. Damiol's mind — what's left of it — controls Am'horok.* She shivered.

"Not controls, child." The voice was as dry as the sound of a bat's wings.

Jessany whirled, knife in hand.

The Lord smiled his lipless smile. "He will not last long now, child; he is almost exhausted. Human minds are not so strong as those of the old ones. Do not be so frightened — it is only a machine. Oh, and do not move." The Lord pointed a finger; lightning leapt from the wall and struck the floor at her feet. "It would be ... most regrettable to have to cause your death."

Jessany, playing for time, gestured at the helmet on Damiol's head, and the banks of lights on the ceiling. "What is it?"

"It is really quite simple, though it took me many years to comprehend totally. The parts of the brain that normally control the voluntary and involuntary functions of the body are used to control the life functions of the city. The old ones manned it, as it were, in shifts. The human mind, though, is less flexible. Certain nerve connections must be blocked, and the body maintained mechanically, as you can see."

"Then is he dead?" *Here is the heart of the taint; it, and he, must be destroyed. But how?*

"Oh, no, child, not dead. Not yet." The Lord lightly massaged one bony hand with the other. "But the process of the machine slowly destroys the brain cells, and the body inevitably suffers from its long neglect. When he is released, he will have the mind of a ... well, he will have no mind, as you or I would know it. There is a roomful of such, here; some live for many years. It is not a pretty sight, but they are happy enough. Perhaps you would like to see?"

Jessany shook her head. *Better dead than that.* She felt behind her for Damiol's presence on the bier, touching him with a sort of mental caress. *It is true, what the Lord says; he lives, but his awareness is gone. Then fare you well, my love. Now our child shall never be.*

In a blur she leapt the bier, so that Damiol's body lay between her and the Lord. She struck with her knife, down through his throat, into the spinal column.

Damiol's body twitched at the stroke; the Lord looked on in sudden fear. The metallic voice that had greeted her uttered a low-pitched squeal.

The Lord pointed his finger; Jessany threw herself backwards. There was no lightning. Above her the bank of lights was going wild. *The city will die with Damiol: his mind's death will kill it.*

Jessany hurled her knife at the Lord as she rose; it caught him in the eye and went in deep, skewering his brain.

As he fell, clutching at the hilt, she leaped for the door and ran down the corridor, following the same winding path by which she had entered. The walls seemed to ripple as she ran; certainly the stairs buckled beneath her feet.

Behind her the cold voice of the city shrieked out the fury of its dying. She could not tell its voice from Damiol's.

The palace's mouth fell behind her, but she was unsure for a moment that she was outside. The miasmas of Am'horok had gathered like pooling black blood, smothering light. The air was a damp breath, pouring sluggishly through the streets. Somewhere, screams were beginning, as muffled as the fog.

Jessany spied an opening and headed into it, dirk still drawn. The black walls around her seemed to shudder, rippling in the mist. Her head was pounding, filled with a voice that was all she could hear.

Damiol's voice, fading. She tried to cut it off, but could not. It was too much a part of her now, in the flood of emotions. The voice swelled louder within her; she grabbed at it desperately, hardly noticing that she had reached the next street.

"Damio!" she cried aloud.

The mental voice was not all his. As she had touched the city before, so

it flowed into her now. Damiol's pleas melded with those of something more ancient: Am'horok.

Her body passed away.

And she was watching herself running, filled with the gaze of black empty windows. She felt the tread of her passage on the surface of her streets. She ... was dying ... the ancient life, so close to recovery, shattered abruptly at the brink of ages. *Ngha'yha agheeth klakaanan! Am'horok! Jessany!* The voice was her own; the voice was the city's. She thrashed, and the cells of her organism clashed against one another, the softer ones smashed, bleeding suddenly in a thousand constricting rooms.

Dying....

Jessany stopped. She was herself again. The mind of Am'horok had cut her off in its death throes. Ahead of her, the street was closing toward her in a grotesque peristalsis. Other wild-eyed folk had thrown themselves into the street and stood staring as the walls closed over them, entombing their screams.

Jessany leaped sideways into a doorway, entering a stagnant room.

Outside, the street slammed inward. A hard black wall pounded up against the door, inches from her face. In a moment it pulled away again. The peristalsis rippled down the street.

She hurried back outside, into the red-smeared streets.

Around her, the walls cracked upon themselves, splintered with fis-

sured webs of decay, clashing destruction as she ran. Spires crumbled into the streets. The screams of the city were fading, as cracked as the walls.

And then the desert lay before her, bathed in unreal moonlight. She headed through, as the gate's black mouth closed on her heels. The sudden thunder of its contortion threw her to the ground.

She lay in silence, sobbing. *Damiol*

Behind her, the city crumbled away, settling into ruins, falling still at last. Soon she lay in total silence, her head full of emptiness. Damiol was dead, and Am'horok with him.

"Jessany?"

Above her, a dark shape stood against the night sky, cut from the heavens. She began to weep again.

"Yh'harne," she said. "Oh, Yh'harne."

He helped her to her feet, gave her water and bathed her face, kissed her gently and stroked her hair. The desert was quiet around them, lonely and still.

Their eyes met and did not wander. Damiol and the city seemed very far.

"Would you like to come with me?" she said softly.

The boy nodded. "Of course." He paused a moment, began to laugh. "Of course, Jessany."

She began to laugh too, holding and kissing him in the faint moonlight, beside the monumental ruins of Damiol's tomb. †

An ancient city is forced to sacrifice its past in order to survive for the future, and one visitor questions if the sacrifice is worth it.

Taaehalaan Is Drowning

BY
LEE KILLOUGH

T

aaéhalaan is drowning. We are murdering it.

Bitterly, David Solomon looked out the window across what remained of the ancient city ... down into streets with paving stones fit together so well that not even a knife blade would slip between them, down on spired buildings adorned by *bas-reliefs*, stonework carved from translucent pink and green stone, and frescoes whose aged colors still looked clear and brilliant. From his window, he saw three squares where statuary celebrated the ancient heroes and myths, carved of the translucent stone with such realistic detail they looked as though they might begin to breathe and step down from their pedestals.

He bit his lip. Taaéhalaan glowed like a jewel even as it died. Every day the waters of the Zoaa Lenáaemal, the Misty Sea, ominously dark in the

dusky sunlight of Chaaé-saa's red sun, rose a bit higher, swallowing more streets and walls, inexorably inundating the matchless beauty and Chaaé-saalan heritage.

"The water reached Heroes' Square today," he said.

Behind him in the room serving as Carmea Flowers' office, the soft tap of computer keys stopped. He pictured Flowers looking up from the screen, perhaps with a brow raised. She knew better than he the exact level of the water each day, but never the names of the streets being submerged. He doubted she cared to learn. What murderer wanted to know his victims?

"I suppose you've been down there salvaging artifacts."

The acid edge on her voice brought him around to meet her eyes, green and opaque as jade, and to be struck again by the incongruity of that musi-

cal, feminine name attached to someone no more musical and feminine than her construction equipment. "They're trying to keep farther ahead of the water than that. They removed what they could from there last week."

"Wonderful." Flowers looked back down at her computer screen and resumed tapping codes on the keyboard.

David's jaw tightened. "*What they could* consisted of only three small statues and some stonework from surrounding buildings. We need lifters to move the big statuary. There's no way at all to save the frescoes."

If Flowers heard the accusation in his voice, she showed no sign of it. Her eyes never leaving the computer screen, she said, "You taped them with the holocorder, didn't you?"

As though that solved the problem. He frowned. "If you'd let them have just one lifter—"

Her eyes snapped up. "I won't go through that again. The construction equipment came from Earth at great expense to build and maintain canals from the mountains. I would hate to try maneuvering a lifter through these streets, anyway. I might try if the Chaaësaal themselves asked for one, but they haven't, so every piece of equipment remains where it is."

The jade eyes dropped back to the computer screen. From the window, David watched her in helpless frustration. Lord, how he wished he had some official position in the project higher than interpreter. Of course,

signing on and coming out, he had no way of knowing he would become so completely captivated by a world that he had found of only mild interest on holotape, had never expected his soul to bleed at the idea of consigning a city to the sea.

"There must have been some other way to handle the project," he said.

Flowers did not even bother replying to that.

"Surely it could have waited a bit longer, until some way could be found to save Taaëhalaan."

She looked up one more time, jade eyes without sympathy. "I did what I was expected to do. Now if you don't have anything to do here in the office, Solomon, why don't you go out and play with your precious artifacts?"

Wordlessly, he left. Descending the delicate web of stairs to the ground floor, he remembered her answer on the first occasion that he protested Taaëhalaan's death. "This is an old planet," she had said. "You saw it from space. Not much surface water. Landlocked seas. Each year they evaporate more. The salinity increases, killing more aquatic species. The biologists tell me that the last ten years of drought have dropped the sea level so drastically that releasing the underground water in the mountains to refill the basin is of critical importance."

But what a price the Chaaësaal paid to renew the sea, David reflected in despair. Taaëhalaan was over three thousand years old, one of the greatest

cities in the history of Chaaésaa. Now they had to give its glory to the dark waters of the Zoaa Lenáaemal.

David shivered as he came out into the street and stopped to press his jacket closed against the chill of the dusky sunlight and brine-scented seawind. Underfoot the ancient paving stones sloped toward the center of the street, worn in a trough by uncountable generations of passing feet, hooves, and wheels. Flowers had chosen the highest section of the city for her officer to avoid the necessity of moving back continually from the rising water. That also made it in the oldest section since Taaéhalaan's builders had added seaward over the centuries, following the receding shoreline. David found sad symbolism in losing modern Taaéhalaan first, forcing the population back into the older city, into increasingly more ancient buildings and narrower, more torturous streets.

Outside the project office, the sharp turns barred most vehicles except carts and the very smallest of mechanized transport so that the traffic flowing past David was principally pedestrian. Most, too, were Chaaésaal, wrapped in heavy clothing that muffled the bony angularity of their bodies, exposing only long, hairless heads and hands whose color looked grey in the sunlight. A mere scattering of off-worlders moved among them; however glorious Taaéhalaan's past, few tourists cared enough about it to leave the comforts of more modern cit-

ies in still-verdant parts of the planet.

Moodily, David joined the stream of pedestrians. As he walked, he extended all his senses, trying to absorb the scents, sounds, and sights of the city in a desperate this-is-the-last feeling, as though committing Taaéhalaan to memory would preserve the immortality being taken by the sea. Around him rose the spired buildings, wrapped in briny seawind and dusky sunlight, their pink and green stonework almost luminous, elaborately carved into fanciful representations of plants, animals, and Chaaésaalan faces. The translucent stone appeared as lintels, too, decorated with figures and faces representational of the family which had built the house.

The genealogy of the city is recorded over its doorways, David thought, squeezing past carts parked outside a library.

He paused for a few minutes to watch crates of books being loaded. If Flowers had waited to open the canals, had donated some of her equipment for just a few months, this city might have been diked against the sea, or at least evacuated properly. Instead, its citizens packed hastily, fleeing with the water figuratively wetting their heels, discarding who knew what treasures in the rush, irreplaceable items now lost forever.

He had had no destination in mind as he walked, but without much surprise, David eventually found himself in Heroes' Square, with its three empty

pedestals and sea water lapping over the street paving on the far side. He reached out with one hand to trace the lettering and *bas-relief* figures around the pedestal of a remaining statue. *If Flowers had waited just a year...*

"Are you saying goodbye to Maa-helén, Daafid?"

He turned at the liquid Chaaésaalan words to find Soél, the younger sister of the household where he rented a room ... Soél, laying a long-fingered hand on his arm in the touch-loving manner of her race and twisting his name to her own pronunciation.

"I'm saying goodbye to everything." He looked beyond the statue of the hero, across the square into the streets sloping into the sea, at the march of now-abandoned buildings following them down and being engulfed until just the spires remained visible far out from the shore. He imagined the vaulted halls and rotundas filled with water and curious, exploring sea creatures, and stonework, no longer luminous in the inky depth, being encrusted by plants and barnacle-like creatures. "Damn," he said softly.

"Is there no joy in you, Daafid?" Her long, grey-looking fingers moved along the sleeve of his coat, stroking the fabric. Wide-set dark eyes regarded him in mixed anxiety and curiosity.

He turned and touched her in turn, a finger following the high orbital ridge around to the sharp outlines of the zygomatic bone and the small, flat shell of her ear. He smelled her alien but no-

longer-disagreeable fishy scent. "Sometimes," he said with a faint smile.

His mouth remembered her salty taste and his body recalled hers — bone lean, skin cool against his but warmer than the color of her skin led him to think it would be — the one night they had tried, and failed, to make love. David did not understand why she, unlike most of her people, who accepted off-worlders with disinterested matter-of-factness, strove to know him and why he was what he was, but he was grateful. Even in the failure of sexual relations, her friendship provided a comfort that helped ease the pain of the deathwatch.

They walked on together, fingers intertwined ... along streets at the water's edge at first, then up away from it, back to a level where workmen were removing pink stonework from around the arched entrance of a building. The workmen chisled hurriedly, breaking loose the blocks and loading them into a cart drawn by a thin, tired-looking eel. The stone glowed, filled with ruddy sunlight. David sighed.

"Why do you grieve for Taaéhaalaan?" Soél asked.

He had lost count of how many times she asked that, and how many replies he had given her, looking for an answer that would satisfy her. This time he tried a question in return. "Don't you resent having to give it to the sea?"

Soéel shrugged — not a Chaaésaa-lan gesture but one she had learned from him. "A sacrifice, but necessary, and a fair price."

"Fair?" he cried. "What's fair about losing your past?"

Her eyes widened. "Of what use is the past to us without a future? Daafid, the sea was disappearing, drying up. If it had died, so would have we on its shores, but the Terran woman Faalówers brings water to renew the sea. If we give up Taaéhalaan, it is in return for life. This is a time for rejoicing, not grief."

He wished he understood her better. How could she accept the city's loss so calmly when his heart, the heart of an alien, cried out in agony against the destruction of all this ancient beauty? Surely it was worth at least a few tears. He shivered in the cold breath of the seawind.

The problem, of course — he came back to it once more — the problem was time. "With time," he said, "if Flowers had given it to you, instead of pushing the project so fast, you could have had both the new sea and the old glory."

Soéel stared at him. "Pushing the project? But, Daafid, Faalówers did not push. We demanded immediate instrumentation."

It was his turn to stare. "You—"

He never finished the question. A cry interrupted him, a female voice weeping and calling for help. The workmen scrambled down from their

scaffolding and ran toward the sound. David and Soéel followed.

Just around the corner lay a square with an old well, drilled to bring the city fresh water centuries before, then sealed over as more modern plumbing became available. Now with the people retreating from the sea, it had been reopened and put back to use.

A Chaaésaa-lan woman leaned over the rim, reaching downward. "My child! She fell in!"

David crowded to the rim with the workmen and Soéel. Meters below, a small form thrashed screaming in the water. Amid the liquid babble of the Taaéhalaanese dialect around him, David quickly considered what to do. The well was too deep to simply reach down for the child. Something needed to be done immediately, though because the weight of the child's water-soaked clothes would pull her under before long. Her screams cut off temporarily even now as water filled her mouth. Her thrashing brought her up again, but David knew that would not last.

He grabbed the bucket from the rim and began lowering it. "Grab the rope," he called.

Both Soéel and the mother repeated the instruction, but either the overlay of voices prevented the child from understanding, or they were drowned out by panic and her own screams; she ignored the bucket. She went down again, this time to the eyes. The mother shrieked in terror.

David stripped off his boots and jacket. Without another thought, he swung over the lip of the well, hung by his hands, then took a breath and let go. He seemed to fall forever, and on the way down it suddenly occurred to him that if the water were shallow, he could break a leg.

He hit the water and though the icy cold of it almost made him gasp, he found it deep enough. His feet touched bottom with only a slight shock. Pushing off, he shot back to the surface and grabbed the child.

She wrapped her arms tightly around his neck, fastening to him with the desperate strength of terror. By treading water vigorously, David managed to keep them both on the surface, despite the water in their clothes.

Once she had something to hold to, the child stopped screaming, but when David tried talking to her, the wide-set eyes regarded him without comprehension, black with fear. He called up to Soëel, "Give me slack on the bucket rope. I'm going to tie it around the child so you can pull her up."

He reached for the bucket. The child would not loosen her hold on his neck long enough for him to slip the rope around her body, however. He was forced to push the bucket under the water and bring the rope up between them from below. Lowering his arms lost him some surface support. As he sank lower in the water, the child screamed again and tightened her hold. She tried to climb higher on him.

The action buried David's face in the sodden, icy-cold fabric of her clothes, blinding and almost suffocating him.

He fought her strangling grip and the clumsy weight of the water-filled bucket while trying to tie the rope blind, with hands going numb from the cold of the water. It was like working in boxing gloves. He could tell by the texture that the rope was old and thin, but he prayed it would hold the child's weight.

When he thought he had a solid knot, he called for the workmen to pull the child up. He felt a tug, but the child remained leeches to his head. He pawed at the child's hands, calling up for the workman to pull harder, but she still clung, defying their combined strength, and his own hands had become so numb, he could barely feel anything, let alone manage enough of a grip to pry hers off.

Then Soëel cried out in dismay. The upward pull stopped abruptly in a coiling rain of rope. David managed to twist his face free and looking around, found the end of the rope floating on the water near him, frayed apart.

The cold ate into him. Panting, he kicked hard to keep himself afloat and hold off the numbness in his hands and arms that threatened to invade the rest of his body. With the first touches of panic, he wondered how they would get out of the well now. Was there more rope available close by? At the work site, perhaps? No, he remembered, the workmen had not been using a

pulley to let down the stone, merely manhandled it from worker to worker into the cart.

"Send someone after Flowers, Soëll!" he called up.

Though that was probably a futile effort. By the time she could arrive, he would have passed the point when he could keep afloat any longer. He estimated he had only minutes more to get out of this water. His mind raced desperately. Was there *anything* they could let down for him to grab? Or a way to climb high enough for them to reach him?

He felt along the wall of the well, but like the street above, the stones fit tight and smooth, offering no hand holds, even if his fingers had been able to grip.

Still ... lifting themselves might be a valid solution yet. If the water level could be raised, he and the child could float up with it, into the reach of the people on the rim. Was there a way to do that?

He thought, suddenly, of Archimedes. Fill the well and the water would be displaced upward. What to use to fill the well, though?

The babble of voices came down to him, speculating on the value of trying to tie clothing together into a rope or making a living chain, each person grasping the ankles of another until the two in the well could be reached.

Hearing their voices reminded David of what they had been doing.

"Daafid, what do you want us to

do now?" Soëll called.

He opened his mouth to answer, but no words came out. He knew what could be done. They had a ready source of material to fill the well ... but his soul recoiled from it. He could not possibly ask them to use *that*.

His tiring, numbed legs faltered and he sank in the water. Cold washed across his chin. The child screamed. David groaned, praying for Flowers to hurry. If he had time enough to wait for her, he would not have to fill up the well.

His legs faltered again and his sodden clothing dragged at him. Coughing out the water that washed up over his face, David realized he had no time to wait for Flowers. He had to take action immediately. With a knife twisting in his heart, he made his decision, and called instructions up to Soëll.

David sensed her surprise, but her head nodded — another human gesture she had learned from him — and her silhouette and those of the workmen disappeared from above him. Only the mother remained, calling down tearful, assurances to him and the child.

Shortly, he heard the rumble of cartwheels on the paving, then the crack of breaking stone. Soëll called a warning.

David pulled as far to one side of the well as possible and turned so that the child was shielded between him and the wall. Then a block of stone fell past into the water. He tried not to watch its luminous glow disappear,

but merely the sound of it striking the surface was enough for a little piece of him to die, thinking about it.

More rock dropped into the well, and with each piece, pain stabbed, but the water level raised fractionally, too, and David forced himself to think of that rather than of the ancient, irreplaceable carvings broken and drowned below him.

He no longer felt any of his body, or the child's, when he realized the light had brightened. Close above him, Soéel's voice said, "Hand up the child."

By now the child was also numb, too cold to hang on any longer. David lifted her above his head, struggling to kick hard enough to keep from being pushed under by the action. His burden lifted away from his hands. Moments later, something grabbed his wrists and he, too, was pulled up, dragged out over the rim of well, gasping and shivering.

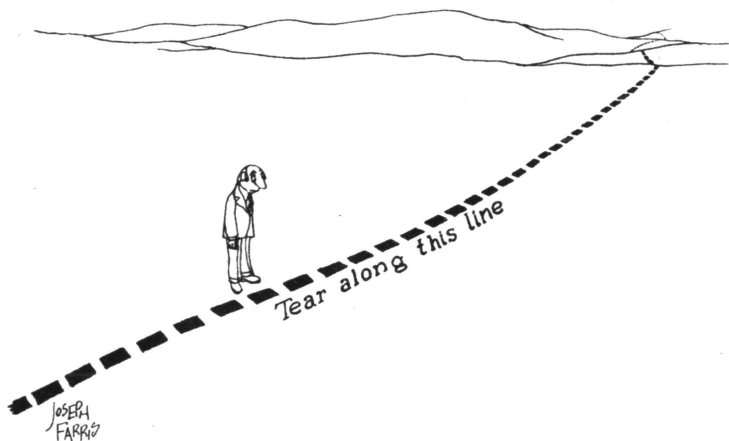
Soéel opened her long coat and wrapped it around the both of them, pulling him close to her. "You will be all right?"

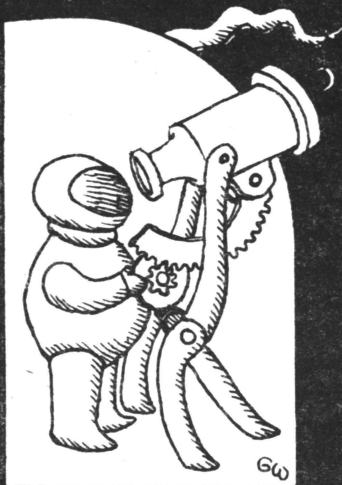
Over her shoulder he saw the child crushed against the chest of an hysterically happy mother. "Yes, just as soon as I unfreeze," he said.

Soéel drew her head back to meet his eyes. "I did not mean that."

David put his arms around her slim, alien body under the coat. "I know." He felt the heat of her body begin seeping into him, dissolving the ice in his bones. "You meant the stone." He thought of it with a pang but no regret. There had been no other choice. "A sacrifice for life," he said.

Like *Taaēhalaan*, he thought, and felt some of that pain, too, dissolve in understanding. Holding Soéel, he looked around at the glowing, spired city, and his heart gave it sadly to the sea as he wished its people a long future.





Science

ISAAC ASIMOV

Drawing by Gahan Wilson

THE DANCE OF THE STARS

My wife, Janet, and I were hastening to catch a train the other morning. The trouble was that it *was* morning, the morning rush-hour in fact, with winter slushiness underfoot so that no one wanted to walk even short distances. That meant there would be no taxis available.

Since the train wouldn't wait for us, and we could scarcely walk a mile and a half through the slush with our bags, we decided to take the bus.

Came the bus! People crowded into it until no more would fit — and there we were, still outside. We then noted that people were also getting into the entrance in the rear, which was not an entrance at all but an exit. We were in no mood to quibble. We raced over, and we were the last two in. I just barely fit.

There is no one at the rear door to accept fares, however, so the people who get in there do not pay fares at all — behavior I consider unsocial and uncivilized.

As we were approaching Penn Station, we found the bus's population density had thinned to the point where movement was possible. Janet and I therefore made our way forward, and Janet said, "Driver, we entered the

bus at the rear and did not pay, so here are our fares." She tossed in her sixty cents and I tossed in mine.

The driver glowered at us and growled, "Do you know you could be arrested for getting in at the rear?"

I stifled the impulse to ask, "Arrested by whom?" since the last time any policeman has been seen on the streets of New York was some time in 1967, and merely sighed. We were the only ones who, having gotten on in the rear, were conscientious enough to pay our fares — so *we* got the threat.

But that's the way the Universe works, which brings us back (at least eventually it will) to the subject of last month's essay — Barnard's star.

If we ignore planetary perturbations, which are very small, we might say that the Earth travels about the Sun in a smooth and geometrically neat ellipse. And if we say so, we would be wrong.

It is not the Earth itself that marks out a smooth ellipse about the sun; it is the center of gravity of the Earth-Moon system.

The center of gravity of the Earth-Moon system is always on the imaginary line connecting the center of the Moon to the center of the Earth. Since the Earth has 81.3 times the mass of the moon, the center of gravity is 81.3 times as close to the Earth's center as to the Moon's.

This means that, on the average, the center of gravity of the Earth-Moon system is located 4,728.2 kilometers (2,938 miles) from the center of the Earth. When the Moon is at perigee and is closest to the Earth, the center of gravity is correspondingly closer to the center of the Earth, and when the Moon is at apogee, and farthest, the center of gravity is correspondingly farther from the center of the Earth. The difference is not great, however, only a matter of some 600 kilometers at most.

The Moon travels about the Earth in an elliptical orbit with the center of gravity of the Earth-Moon system at one focus of the ellipse. This is almost the same as saying that the Earth is at one focus of the ellipse, for the center of gravity of the system is so close to the Earth's center that it is actually inside the Earth. Its depth, on the average, is 1,649 kilometers (1,025 miles) below the surface of the Earth.

The Moon also revolves around the Sun, but it obviously does so in an orbit that is not a smooth ellipse, for it is sometimes on the side of the Earth away from the Sun and sometimes on the side toward the Sun. The difference in the Moon's distance from the Sun, depending on which side of the Earth it's on, is 766,000 kilometers (476,000 miles) — allowing for the fact that its orbit about Earth is slightly tipped to its orbit about the Sun.

This difference isn't much compared to the total distance of the Earth-Moon system from the Sun. The difference is only about half a percent of the total distance in fact, so that if we were to mark out the Moon's orbit about the Sun to scale, it would look like a smooth curve, and one that was nearly circular to boot.

Suppose, however, we looked closely and examined the orbit as drawn to scale under a strong magnifying glass and made precise measurements of the distance of different parts of the orbit from the Sun's center. We would then find a series of very shallow waves in the Moon's orbit about the Sun, a little over twelve of them in the course of the complete orbit.

Suppose we were observing the Earth-Moon system's travels about the Sun from afar and, for some reason, could not see the Earth but could observe only the Moon. From the manner in which the Moon deviates from the smooth ellipse, the distance to which it recedes from it and the time it takes to complete the wave, it would be possible to infer the existence of the unseen Earth, to calculate the distance between the Moon and the Earth and, if the Moon's mass could be worked out, to deduce the mass of the Earth.

If it were only the Earth that was seen and not the Moon, the data on the unseen Moon could be worked out similarly, but with much more difficulty. The Earth swings away from the ideal orbit with a wavelength precisely that of the Moon, but an amplitude only $1/81.3$ times as great. Therefore, the Earth's movement must be plotted with much greater precision.

Of course, this is an artificial problem, since if we can see the Earth, we are virtually sure to be able to see the Moon, too, and vice versa.

Even if the Earth-Moon pair were situated so far from us that the Earth could only be seen through a good telescope, the Moon would also be seen. We know this is so because Pluto is smaller than Earth and its satellite, Charon, is smaller than the Moon, yet though both are at a great distance from Earth, both can be seen. The only reason it took nearly half a century after Pluto was first seen to spot Charon as well is that the two are so close together that, at their vast distance, they melt almost into a single point of light. If Charon were as proportionately far from Pluto as the Moon is from the Earth, Charon would have been discovered immediately after the discovery of Pluto.

As it is, as soon as Charon was seen, then from its distance from Pluto and its period of revolution about Pluto, the mass of each world could be calculated, even though the mass of Pluto had formerly been a puzzle.

There are cases, however, where, of a pair of bodies circling a common center of gravity, one is easily seen and the other cannot be seen at all. This would be true if one body were comparatively large while the other were very tiny. Better yet would be the case where one is enormously bright and the other comparatively dim and comparatively close to the bright companion. In that case, the minor object would be not only difficult to see because of its intrinsic faintness but also because it would be drowned out in the inordinate brilliance of the other object.

Suppose that, instead of considering the Earth-Moon pair, we were to consider the Earth-Sun pair.

If the Sun-Earth pair were so far away that the Sun could only be seen in a good telescope, there would be no hope, under the conditions of observation now available to us, of seeing Earth at all. Earth would be too dim, and it would be so close to the Sun in appearance that it would be totally masked.

Nevertheless, might we not tell that the Earth was there, even though we couldn't see it, simply by observing the Sun's motion?

The Sun moves about the center of the Galaxy in a period of about 250,000,000 years, and if it were alone and unaccompanied, it would do so in a smooth ellipse (barring the effects of gravitational perturbation produced by other stars, which we can assume will be small enough to neglect).

It is not the Sun, however, that moves in that ellipse but the center of gravity of the Solar system. If the Solar system consisted only of the Sun and the Earth, then the center of gravity of the Earth-Sun system would be on the line connecting the centers of the Earth and Sun. Since the Sun is 324,000 times as massive as the Earth, it would be 324,000 times as close to the Sun's center as to the Earth's.

This means that the center of gravity of the Sun-Earth system would be 462 kilometers (287 miles) from the center of the Sun, in the direction of Earth. Therefore, as the Sun progresses in its journey about the Galactic center, it wobbles slowly from side to side with a period (of course) of one year.

The wobble isn't much, for it is only about $1/1500$ the Sun's radius, and detecting it would pose a pretty problem indeed for anyone observing the Sun from, say, some planet circling Alpha Centauri.

But then, in observing the Sun, we are not really observing the Earth-Sun system. There are other planets circling the Sun, and each one has a planet-Sun center of gravity of its own. On the whole, we can say that the

more massive a planet is and the more distant it is from the Sun, the greater the displacement of the planet-Sun center of gravity from the Sun's center.

As it happens, the four gas-giants, Jupiter, Saturn, Uranus and Neptune are all considerably more distant from the Sun than Earth is, and each is considerably more massive than Earth is. Any irregularity imposed upon the Sun's motion by Earth's existence would be insignificant in comparison to the much greater irregularities imposed on it by the gas giants. And if Earth can be ignored, so, certainly, can the vast number of bodies in the Solar system that are even less massive than Earth. Even distant Pluto and Charon, whose vast separation from the Sun might be thought to impose a considerable displacement of the center of gravity, have so little mass that their effect on the Sun's motion is less than that of Earth.

Let's consider, then, the center of gravity of the systems that involve the gas giants only. Knowing the mass of each planet and its distance from the Sun, it turns out that:

Planet	Distance of Center of Gravity from Sun's Center	
	Kilometers	Miles
Jupiter	763,800	475,000
Saturn	419,000	260,000
Uranus	129,000	80,000
Neptune	239,000	149,000

As you see, the greatest displacement of the Sun is produced by Jupiter, thanks to its huge mass. The other three planets are considerably farther from the Sun than Jupiter is, but they are also considerably less massive, and it is the latter effect that predominates in this case.

The center of gravity of the Jupiter-Sun system lies outside the globe of the Sun, since the Sun has a radius of only 696,000 kilometers (432,000 miles). The center of gravity lies 67,800 kilometers (43,000 miles) above the Sun's surface, in the direction of Jupiter.

As the Sun moves in its orbit about the Galactic center, then, it swings this way and then that, with an amplitude greater than its own radius and with a period of about 12 years. (Even if the Sun were motionless, for that matter, it would still move from side to side and its center would make a tiny ellipse in the sky, thanks to Jupiter's motion about it.)

If we were viewing the Sun from a planet circling Alpha Centauri, with instruments equal to the best we now have on Earth, we might just barely

be able to make out this dance of the Sun. It's exact nature, whether it was symmetrical or distorted, whether it involved a change in rate of motion as well as a change in position, or whether rate of motion entirely replaced change in position, would depend on our angle of view.

In theory, whatever the position from which the Sun was being observed (provided it was no farther off than Alpha Centauri) and whatever the rate of motion of the Sun relative to ourselves, we could detect Jupiter and tell something about its properties if our measurements were delicate and precise enough.

Indeed, as we watched the Sun and its motion very precisely, we would find that it would sometimes deviate more than usual, and sometimes less than usual, depending on whether Saturn was on the same side of the Sun as Jupiter was, or whether it was on the opposite side. The position of the center of gravity of the Solar system would depend not just on Jupiter, but on the position of every object in it — and, overwhelmingly, on the relative positions of the four gas-giants.

An observer from the Alpha Centauri system, if he were able to make *very* precise and prolonged observations, might be able to detect from the sinuosity and changing speeds of the Sun's motion the existence of four planets of particular masses and particular distances from the Sun. Given enough time and enough precision (within the limits of the principle of uncertainty) he could, in theory, detect even smaller bodies of the Solar system.

(And, before I forget, just how does an observer note the direction and speed of motion of a particular star? By measuring its distance from some apparently nearby star that is actually so distant that its own motions, even over prolonged periods of time, are too tiny to be detectable and that therefore can act as a stationery reference point.)

It works the other way around, too. If, from our Solar system, we observe the stars, we could, in theory, detect their wavering dances and tell whether they possess planets. We could tell how many, how massive, and how distant from the star those planets were, if we could observe the dances delicately enough.

However, the farther a star is, then the smaller the apparent dance produced by an orbiting planet. At even moderate distances (for stars) the apparent irregularities in their motions become so tiny that there is no practical hope whatever of direct detection of planets through them. We must therefore confine ourselves to the nearest stars — our immediate neighbors.

Even in the case of the nearest stars, we can only expect to detect giant

planets, like Jupiter, or larger. Earth-sized planets would produce but an undetectable wobble in even the nearest star.

For that matter, even Jupiter won't do the job unless the star is less massive than the Sun. (What counts is not how massive an orbiting object is in absolute terms, but how massive it is in comparison to the object it circles. The Moon produces a considerable wobble in Earth, but if it were circling Jupiter instead at the same distance, Jupiter's wobble would be inconsiderable.)

This has actually been put into practice. The star Sirius is 2.5 times the mass of the Sun, yet it dances to an extent that is easily detectable, so easily detectable that it was detected a century and a half ago (see *THE DARK COMPANION*, April 1977). But then, Sirius dances to the tune of a white-dwarf star, too dim and too close to Sirius to be easily detectable, but with the mass of a thousand Jupiters. That's not the same thing as detecting a planet.

Well, then, can we detect, at stellar distances, the much tinier dance that would reflect the presence of a planet and not merely another star? We might! In fact, we may have done so!

There are about 15 stars close enough to us and small enough to exhibit just barely visible irregularities in position if they had planets circling them that were like Jupiter (or more) in size and in distance from themselves.

The first case of this sort involved the star, 61 Cygni (the 61st star in the constellation, Cygnus the Swan, so-numbered according to a system invented by John Flamsteed (1646-1719), the first Astronomer Royal of England).

As it happens, 61 Cygni is close to us, as could be inferred from the fact that until Barnard's star was discovered (see last month's essay) 61 Cygni had the fastest known proper motion. In fact, F.W. Bessel (1784-1846), in his attempt to determine the distance of a star, chose 61 Cygni as his victim for precisely that reason. He managed to measure the star's parallax and announced the result in 1838, so that 61 Cygni has the distinction of having been the first star to have its distance determined.

It is actually 11.1 light-years from us, which amounts to 105 trillion kilometers (65 trillion miles). That makes it, of all stars visible to the unaided eye, the fourth closest to ourselves.

Actually, 61 Cygni is a binary star, two stars circling about a common center of gravity.

Each of the two stars is smaller than the Sun. The larger of the two, 61 Cygni A, has a diameter only about 7/10 that of the sun. The diameter of

61 Cygni A is about 965,000 kilometers (600,000 miles) while that of 61 Cygni B, the smaller of the pair, is about 900,000 kilometers (560,000 miles). The two stars combined have about two-thirds the mass of our Sun.

The two stars of the 61 Cygni binary system are separated by an average distance of about 12.4 billion kilometers (7.7 billion miles) or a little more than twice the average distance between our Sun and Pluto, and they circle each other about their center of gravity once in 720 years.

Either or both stars could have a planetary system that would not suffer undue interference from the other star, though the systems would probably have to be somewhat less extensive than is the Sun's, which lacks any companion star whatever.

If the planet Earth were circling one of the 61 Cygni stars at the same distance it now circles the Sun, that star would appear in the sky as a red-orange object distinctly smaller than the Sun (which would mean that the Earth would be frozen into a permanent ice age, of course). The other 61 Cygni star would be dimly visible, if it happened to be shining by night, as a point of light. If it happened to be shining by night, it would be a bright star-like object, showing no visible disc.

In 1943, the Dutch-American astronomer Peter Van de Kamp (1901-) found an irregularity in the movement of the 61 Cygni stars about each other. From this, he deduced the presence of a third object in the system which he called 61 Cygni C and which was, of course, smaller than either star.

If 61 Cygni C were responsible for the irregularity, it would have to have a mass eight times that of Jupiter. It would be just too small to set up nuclear fusion at its core and shine by its own light, so it meets the usual definition of "planet." This means that 61 Cygni C is the first extraterrestrial planet to be discovered.

Two Soviet astronomers have been studying the 61 Cygni system carefully in recent years and, combining their observations with the earlier ones of Van de Kamp, have reported that the irregularity was itself irregular. In April 1977, they suggested that 61 Cygni A might have two planets, one with six times the mass of Jupiter and the other with twelve times the mass, while 61 Cygni B might have a planet with seven times the mass of Jupiter.

If so, 61 Cygni is not merely a binary star, but a binary planetary system. Undoubtedly, if each has one or two large planets, each could, and should, have a whole train of smaller planets, satellites, asteroids and comets — all too small to leave detectable marks on the irregularity.

Nor is 61 Cygni the only star to display the presence of planets. Some

half a dozen others seem to show the presence of super-Jupiters.

This is important. We know that stars are very numerous by direct observation, but we have no similar knowledge that planetary systems are. If planetary systems are very rare (as is possible) then there is no hope that other intelligent beings and other civilizations are to be found anywhere near ourselves. If planetary systems result only from some extremely unusual process in star formation so that our own Solar system is one of only a handful in the entire Universe — then we may be alone!

On the other hand, if planetary systems are common, and if they routinely accompany all but the most unusual stars, then there is a good chance that other civilizations exist, perhaps a very good chance. In fact, as some astronomers argue, other civilizations by the millions are inevitable.

From current theories of the origin of the Solar system, it would seem that the latter alternative is more likely to be true; that virtually every star has a planetary system and that, therefore, civilizations may be common in the Universe. Still, it would be nice if we did not have to depend solely on theory, if we had *some* observational evidence.

If in fact, then, of the very few stars that are close enough to show irregularities, half a dozen do, we must conclude that planetary systems are very common and possibly almost universal. If that were not so, the stringent requirements for detecting such planets would simply not be met.

And now back to Barnard's star—

Of the stars considerably smaller than the Sun, Barnard's star is the second nearest to ourselves. Only Proxima Centauri is closer.

Barnard's star, moreover, is a single star, so there isn't the possibly confusing fact of a second star near itself. What's more, its rapid proper motion should stretch out the wave of irregularity and make it perhaps the more noticeable.

And it *has* been noticed. Van de Kamp has found irregularities in its motion that are larger than those of any other star, and he interpreted them in such a way as to show the presence of two planets circling the star.

Of these the one closer to the star, which we can call Barnard's star B, has about 1.1 times the mass of Jupiter; while the other, Barnard's star C, which is farther away, has about 0.8 times the mass of Jupiter. These planets are the least massive of any of those that have been reported circling other stars. In fact, the second planet is the only one yet reported that seems to be smaller than Jupiter.

Barnard's star B and C do not seem to be very different from the Sun's

Jupiter and Saturn. In fact, Barnard's star B circles the star itself (which we should call Barnard's star A) in 12 years, while Barnard's star C circles it in 24 years — as compared with 12 and 29 years for our own Jupiter and Saturn.

All this is very exciting, except that here we come up to something as disappointing and deflating as that nasty bus-driver Janet and I encountered.

All of this extra-solar planetary data depends on tiny deviations from the expected positions of stars that are just on the borderline of what can be detected.

In recent years, astronomers, observing Barnard's star very meticulously and with a variety of telescopes, have grown dubious over the reported irregularities. These *might* show the presence of planets, but they might equally well be the result of inevitable uncertainties of observation.

And if the results with reference to Barnard's star are made to seem dubious, then the irregularities found in other stars, all of which are even smaller than those of Barnard's star, are surely of uncertain significance.

This would mean that we can't have the confidence of having actually *observed* events that demonstrate the existence of planets. We can't have the security of feeling that planetary systems are very common and, perhaps, virtually universal. We can't have the glorious expectation that there may be other civilizations not too far away that someday we may be able to establish communication with.

Does that mean we have to give up?

Of course not. The *principle* remains untouched. If there are planets circling stars, then that will show up as an irregularity in the star's motion, and this irregularity will be greater, the smaller the star, the larger the

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planet and the greater the star-planet separation. All that is undeniably so.

The only trouble is that even under the most favorable circumstances, the irregularities are too small to be measured with confidence.

In that case, we must change conditions of observation to make small irregularities detectable with greater precision. There is nothing to stop us from doing so except the unalterable and impenetrable wall represented by the uncertainty principle, and we are not as yet near its limits.

An obvious change for the better would be to place a large telescope on the Moon, or in orbit. If we could observe the nearby stars without the interference of an absorbing, refracting, temperature-quivering atmosphere, that alone would remove an important source of fuzziness and error.

Then, too, once out in space, the full range of electromagnetic radiation can be observed and it may be possible to reduce the contrast between the brightness of a star and the dimness of its nearby planetary companion by choosing some proper wavelength, by the ingenious use of computers and by other devices, so that we might actually *see* the planet.

If then we could unmistakably detect planets about half a dozen of the nearest stars, we would be back to the position of universal planetary system and millions of civilizations. — And if no planets turned up, we would have to accept that, too, and console ourselves with the thought that this might help us develop more accurate theories of star-formation and a better understanding of the Universe.

Either way, this alone would make worthwhile any expenditure of effort or money likely to be involved in putting a large telescope out into space.

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The Free Agent

BY

MICHAEL CASSUTT



e'd been waiting a long time for this launch.

In his ears a familiar voice ran calmly through the old chant: "Six ... five ... ignition sequence start ... booster commit..." He heard rumbling in his headset. "...Two ... one ... lift-off..." And the screen in front of him blossomed with numbers cycling every third of a second.

"Tower cleared," the capcom said.

"Roger, Davey." Mendoza didn't get too excited. After all, there was nothing that could happen that he hadn't rehearsed a hundred times.

"Pitch ten degrees." "Roger." Thirty seconds into the flight and mark. He wasn't much for chit-chat and neither was the capcom. Mendoza wasn't loafing, though. He had something like forty-seven different functions to monitor on the main display. Any significant deviation from the optimax

curves, and he would have to switch to PILOT mode — which would make the launch that much more interesting. "All systems are go," he said.

"No fooling," the capcom replied, laughing.

He thought about what was waiting, up there in the wild black yonder. The Space Operations Center, of course, that misshapen heap that would eventually be a real space station, if they ever got their act together, if they ever got the money. And "Kosmograd," the first space city, with its four, or was it five, dozen Russians and Cubans and Germans. "SRB sep in ten." "Roger."

Suddenly his screens went blank. Total power failure? Hydraulics? It was impossible— "What the hell's going on?"

"Time's up for today," the capcom said.

Damn. "I thought I had a whole hour." He popped the release on the couch and tilted it back twenty degrees to a relatively comfortable recline. The shuttle's cabin windows no longer showed a receding Florida coastline and blue sky — just gray phosphor nothingness.

"Sorry, but the One-Fifteen crew came in early. Bambi says they caught some heavy timeline changes yesterday and he wants a chance to run through them before the meeting in Hugh's office." Hugh was Hugh Dickinson, the Director of Flight Crew Operations, Mendoza's boss. Bambi was Wally Baumberger, prime crew commander for STS-115, the next shuttle flight.

Prime crew. Jerry Mendoza was about as far from that high status as you could get, and still be an astronaut. Prime crew members didn't have to crawl out of bed at six in the morning to steal some time on the center's only single-system simulator. He was lucky to get time at all.

"What the hell are you doing in here, Mendoza, working up a strafing run on Washington?" Bambi squeezed into the cabin. He was bald and ugly and had been in the program since '81.

"That's an idea," Mendoza said, getting out of the commander's couch. "With Senator Stooker's house as ground zero. Of course, you guys could save his life by taking me along. Just give me an air mattress and deck space, and you won't hear a word."

"Not even an occasional cry of

pain?" That was McIntyre, the pilot.

He got out of her way, too, feeling somewhat like a best man on the honeymoon. "Not a peep. What are you real astronauts running today, anyway?"

Bambi looked unhappier than usual. "You won't want to hear what I have to tell you—"

"Oh, heck, I can take it, Bambi. I'm a war veteran...."

They laughed. "It's a sardine flight, Jerry. One dozen goddamn *passengers*, if you can believe that. Four Congresspeople and the rest writers and VIPs. Six hours, three orbits."

"Just like John Glenn," Mendoza said.

"Who's that?" McIntyre asked, and everybody laughed again.

He left the simulator cabin, taking the steps carefully. The war had given him a souvenir, a plastic fragment in his left knee, nothing that would seriously hamper his mobility — wouldn't the NASA doctors love to get hold of that — but every once in a while he felt some stiffness in it, especially on a damp spring morning like this. He picked up a cup of coffee and, sipping at it, trudged down the dark hall to his office. He switched on the light and, reflexively glancing at the outdated nameplate (CAPT. MENDOZA), saw a note taped to the door. He grabbed the slip and read: 4:55, REGGIE GILLIAM CALLED. WCL TOMORROW A.M.

Reggie Gilliam — now who the hell was that? The press had started to

leave him alone in the past couple of months. He couldn't place the name in Washington, either. So he crumpled the note and tossed it in the wastebasket, then sat down at his all-too-neat desk.

He picked up the phone and called home. His son answered sleepily. "Hey," he said, "aren't you supposed to be getting ready for school?"

"It's Friday, Dad."

"Oh. Let me talk to your mother."

Jeannie got on the phone. "Is something wrong, Jerry?"

He winced. Has it gotten that bad? "No, nothing's wrong. They just bumped me out of the simulator for Bambi's crew."

"Damn them, haven't they done enough to you already?"

"It's okay, hon. It was just your typical routine last-minute emergency. You know how it goes. At least Bambi said hello to me this time."

"How thoughtful of him."

"Don't be nasty," he said. "What are you doing today?"

"Oh, I promised Mr. Shivello that I'd come in for a few hours this morning." Jeannie worked as a researcher for a lawyer, a good job because it gave her relative freedom during the day.

"What about Erik?" He kept telling himself he was too old-fashioned, wanting his wife home during the day with the boy.

"I'm dropping him off at Little League on the way. What about you?"

"Well, I *was* gonna sit in the simulator until ... oh, about an hour from now, then I was gonna drop the tapes off at Dickinson's office, you know, just to remind him that I'm still alive. Then I thought I would go to the debriefing for the One-Fourteen crew and find some ass to kiss. Since step A didn't happen, I may just sit here and *siesta* all day."

"Jerry."

"Ah ... I know. I'll do something. I did get a message here, from some guy named Gilliam. Reggie Gilliam. Is that someone I should know?"

"Isn't he on TV—?"

"Christ, that's *all* I need today."

"—No, that's another—"

"He's a baseball player, Dad."

"What are you doing on the line?"

"You can tap into it from the console upstairs."

The kid had no shame. "I never knew that. What kind of baseball player?"

"Pretty good. He's an All-Star, plays centerfield for the Washington Americans." Erik yawned. "But he's pretty old now. I think he's almost forty."

Mendoza was forty-two. "He's supposed to call me today."

"Great! Can you get an autograph for me?"

"Erik—" Jeannie said.

"I'll see," Mendoza said. "I'll see what I can do."

He was on his way to lunch when

the call came. "Mr. Gilliam is on the phone," the secretary said, pronouncing the name as Gill-em.

"Okay." He picked up the receiver.

The first words Gilliam said were, "Tell your secretary I may be in love with her."

Jesus, one of those. "Sure, but she's about sixty." That wasn't true, but he was in no mood to play good old boy games.

"The charm works on all ages," Gilliam said. "This is Reggie Gilliam, Mr. Mendoza."

"Pleased to meet you."

"I called to see if you would be interested in flying down here to talk about a business proposition."

"Down where, Mr. Gilliam?"

"Reggie — St. Pete. At my expense, of course."

"I'm not making any endorsements or investments at the moment ... Reggie."

"This is more of — what would you call it? — a professional engagement."

Mendoza wanted to laugh. "Just for the sake of speculation, Reggie, what does a baseball player want with an astronaut?"

"Well, for starters, Gerardo, I've got a space vehicle, and you're just the man to fly it."

II

He had hoped the change in locale might bring a change in the weather, but if anything, Mendoza felt even hotter and sweatier when he got off the

plane at Tampa-St. Pete. Well, it was only fair: he hadn't been able to quit replaying last night's argument with Jeannie, either. At least Erik had wanted him to go.

On the drive to the airport he had picked up a flimsy paperback called *Who's Who in Baseball 1996* and a *Sporting News*. The paper contained a jargon-loaded survey of "Spring Training — The Grapefruit League," embedded in which was a whole paragraph about Reggie Gilliam:

...Gilliam has been the bomber of yesteryear this spring. His shoulder seems completely recovered from rotator cuff surgery in fall 1994 that limited him to pinch-hitting roles for most of 1995. At 38 he still runs well (asked about his "wheels" he says "They're like full-warrantee, steel-belted radials.") and is looking forward to the two years remaining on his lucrative contract.

That helped a bit, and the *Who's Who* book filled in the gaps. Born in '57 in Chicago, Gilliam was a two-year College All-Star at Arizona State; drafted by the Mets, he jumped straight to the big leagues at age 21. NL Rookie of the Year for 1979 ... a couple of early batting titles, lots of big, booming home runs ... the dive into the free-agent market at age 25, which got him a five-year, four-million-dollar contract. Thirteen years later he was still going strong and making more money than ever.

That Gilliam: commercials, candy bars, T-shirts.

"Captain Mendoza?"

He had taken one step into the sweltering terminal building when a pretty black woman called his name.

"I'm Eunice Christian, Mr. Gilliam's secretary. We have a car waiting for you, if you'll come with me."

"Glad to."

"Did you check any luggage?"

"I just have the overnight bag." He let her take it and followed her to the VIP lounge. He enjoyed the walk through; the lounge was mercifully air-conditioned, and Ms. Christian was wearing one of the new miniskirts, which Jeannie swore she would never wear.

The car was a Mercedes limo with opaque windows. Mendoza got in the back, and the door, as if by magic, closed behind him.

"Captain Mendoza, I'm George Dungee." A neatly bearded black man in a dashiki and sunglasses extended his hand. "Reggie's adviser."

"Where is Reggie?"

"At the ballpark." He glanced at a Piaget wrist unit. "The workout should be over shortly after we arrive."

The limo had started without Mendoza's knowing. So much for the astronaut's keen sense of equilibrium.

"How was your flight?"

He had been sandwiched between a shaven-skulled college boy who smelled of cigarette smoke and ether (he al-

ways felt vaguely ill on commercial liners) and a business woman who kept mumbling into a pocket recorder as she flipped noisily through a mess of hard copy paper. "Fine," he said.

"How long will you be able to stay with us?"

"I have to be back in Houston tomorrow night."

"Are you in a position, Captain, to take leave from your program — or would you have to resign in order to do some work for Reggie?"

Mendoza couldn't help smiling. "Don't you think that's a bit premature, Mr. Dungee?" The lawyer was busy extracting a dark Thai stick from a silver case. He lit it and offered Mendoza the first hit. "No, thanks."

Dungee wasn't so refined as to dislike doping alone. He inhaled, held it without visible effect, then exhaled gently. "Please don't be offended, Captain. Working with a man like Reggie requires a certain amount of pre-preparation."

"I assume you know my situation, or you wouldn't have invited me down here in the first place."

Dungee coughed slightly. "It was impossible to ... ignore the reports of your ... how shall we say? ... differences of opinion with the NASA hierarchy. No, I was simply anxious to save time later, should you decide to accept Reggie's offer."

"That's understandable. But what, exactly, is this wonderful offer?"

"I *am* sorry. I was under the im-

pression that Reggie had told you all about it."

"He just told me that he was looking for a rocket jockey."

Dungee snuffed his cigarette. "That is typical." He didn't look happy. "And slightly inaccurate as well. Briefly, Captain, Reggie's management and investment firm has acquired a Pirri-Weiss capsule and plans to place it in orbit within the next few weeks."

"Those pods don't require crew, Mr. Dungee."

"For retrieval by the Space Operations Center, that is true. But for rendezvous with Kosmograd, our studies show that a trained pilot must be on board."

"I didn't know Kosmograd was taking P-W shipments."

"Let's just say that the system is still in its infancy."

"I'll be damned." The Pirri-Weiss pods were bullet-shaped capsules that were fired into orbit at the tip of high-energy carbon dioxide lasers, which super-heated the air at the base of each capsule, expelling it. It was like having a jet engine without having to carry the fuel. Exxon's pod launcher had been in operation since '93. The Arizona facilities were leased to any party with half a million dollars, usually European or small American firms who wanted payloads delivered to space but couldn't afford room on the Shuttle or on Ariane. NASA, of course, didn't use the pod system: its total mass-to-orbit capability was only 1500 kilo-

grams a launch, less than a fiftieth what a Shuttle could deliver. The fact that a great majority of NASA's payloads massed 1500 kg or less hadn't changed the policy, nor was it likely to change any time soon. Mendoza had learned that the hard way.

"Is there a problem, Captain?"

"Well — the kind of maneuver you've described, Mr. Dungee, is tricky enough with a Shuttle. The minimum requirements are an on-board guidance system, which means a trio of reliable processors, delta-vee capability, which would mean adding at least a pair of engines, not to mention maneuvering fuel. I can't say that I care for the splashdown method of recovery, either. It's perfectly okay to dump cargo in the ocean and pick it up at leisure, but I think I might get seasick. I don't even want to *think* about the political problems."

"The political problems will be taken care of, I assure you," Dungee said. "But — your honest opinion, now. Is a P-W capsule even capable of such a flight. I'm just parroting a feasibility study, you understand. Would *you* fly one?"

"Without getting into the problem of payload, of which you could have damn little, and using off-the-shelf hardware, yes, it *can* be done and I *could* do it. Hell, they were doing plane changes and first-orbit rendezvous with Gemini capsules thirty years ago."

"I see," Dungee rubbed his upper

lip. "Frankly, Captain, I was hoping you would say that it was impossible."

The limo pulled into the parking lot of Landreaux Field and Mendoza got out alone, Dungee having assured him that his bag would be taken on to the hotel, and that he would be riding over with Gilliam.

The cool ride had relaxed him and actually chilled him, and the hot Florida sun felt comforting as he walked up the concrete ramp to the battered old grandstand. He could hear distant shouts, occasional laughs, and bats cracking into balls. Houston, Dickin-son and Jeannie might have ceased to exist.

The Americans' workout was still in progress. Players threw back and forth along the foul lines while others sprinted in the outfield. Inside the batting cage at home plate one skinny kid, wearing number 88 on his uniform, took cuts at a series of looping curves lobbed by a burly, bearded pitcher. The screen protecting the mound was unnecessary, because young 88's hits either dribbled foul or bloomed lazily to the infielders. Mendoza figured there were almost a hundred players out there. Where was Gilliam?

The stands, however, were all but empty. Four or five elderly men sat in the shade beneath the press box, high above home plate. Mendoza preferred to wait in the sun. He could see one spectator sitting a few rows back of the first base dugout.

"Excuse me," he said, "do you know how much longer they're going to be practicing?"

"About another fifteen minutes or so." It was a kid. "Two more guys have to take their turns in the cage."

"Thanks. Mind if I sit here?"

"No, no, go right ahead, man."

Mendoza took the nearest seat and glanced at the kid. He was black, something that hadn't been completely obvious at first because his skin was so light. Beneath an official Americans baseball cap the kid's hair was cropped right down to the scalp, and he wore a T-shirt with the "A" logo. There was an expensive-looking cane laid across the seat next to him. Mendoza couldn't help looking at his legs, which were bone-thin and braced. Poor little bastard. He was probably some local kid who just lived for spring training and the chance to watch the major leaguers up close.

"How do they look?" he asked.

The kid squinted. "Oh, they'll be lucky to finish third this year. They've got some pretty good pitchers, but they're awful fragile. I don't know how their arms'll hold up when it gets to be August. The fielding is very shaky and they've only got a couple of consistent hitters. Now, if they were in the Central Division they might have a chance — but the National East is real tough this year, especially New York and Atlanta."

Mendoza could feel his local-cripple theory drying up and blowing

away. "Ah, which one of these guys is Gilliam?"

"Number four," the kid said.

"I don't see him anywhere—"

"You need to talk to him?" Mendoza nodded. The kid moved the cane and lifted a Sony processor pack out of the seat. He set it on his lap and touched a key. "He's off doing windsprints in right field now. He'll have a couple of hours off before the afternoon workout, which will be light, 'cause they're playing a couple of intrasquad games against St. Louis tomorrow."

"Does that processor tell you all that?"

"Oh, keeping track of training is just something I'm doing for fun," the kid said cheerfully. "Later on Roger Wolfe, the manager, is going to come over here and give me half a dozen potential lineups for the game tomorrow as well as the reports on injuries and player development, you know? I'll feed it into the machine, which is already programmed with a routine of my own design, including the most recent information on the Cardinals, and it'll give me a lineup that should be ideal for the game."

"Jesus, I never played baseball like that."

"You still gotta play the game, man. It just gives you better information, that's all. See, since it's spring training and the games don't count, the program aims for maximum player development. There are some guys who always seem to have trouble getting it

together and this helps. During the season, what you'd want to do is model as many different games with as many different lineups as possible each day, then pick your starters based on the results. But it's still baseball. You still got three strikes."

Mendoza got up, shaking his head. "You work for the team, I guess."

"I help out."

The grandstand ended just past first base, and Mendoza found himself walking at field level along a chain fence toward the outfield. There was a group of players on the other side resting from windsprints. A couple of them were real giants; some, to Mendoza's surprise, weren't any bigger than he was. Number four was definitely one of the big guys — probably six-five, huge shoulders, black as midnight, and going bald. He didn't look too tired, either.

He pointed at Mendoza. "All right, *Gerardo!* Be with you in a minute." He picked up his cap and called to a nearby coach. "Hey, Ellie, tell Roger I'm gonna take off for a while. I'll be back in plenty of time for the PM workout, okay?"

The coach frowned, but Gilliam didn't seem to care. He exited through a gate and, with Mendoza tagging along behind, headed toward the parking lots. "Damn," he said, "you'd think I asked the guy to go tell Shamu there ain't no fish for lunch."

"I didn't mean to interrupt your workout."

"It's no problem. We've got a new manager this year who does everything by the numbers. He likes the idea that I'm what he calls 'ten percent ahead of projection,' but I've got one other number that he pays more attention to, and that's a million-four every year. Thanks, by the way, for coming down here. I hate doing business on the telephone." He dug car keys out of his uniform pocket and opened the doors of a yellow Bricklin Steamer that looked two sizes too small for him. Mendoza was slightly disappointed. After Dungee's limo, he'd expected Gilliam himself to have a private chopper at the very least. They pulled out.

"Did Dungee fill you in on the job at all?"

"Sort of. He says you're buying a pod and firing it up to Kosmograd."

"Doesn't sound too complicated when you put it like that. Yeah, we've got a pod and a cargo and a launch date six weeks from now, and we need a hotshot pilot to see that it all gets done."

Mendoza wished he could take off his jacket. "Boeing has a bunch of people who've driven the pods, and there are a lot of ex-NASA or European guys available."

"True, but ... well, let's just say I hate to see anyone getting blacklisted."

"Who might that be?"

"Come on, Gerardo, don't try to shit a bullshitter. You're in it up to your neck with NASA 'cause of that testimony last year, that senator you got

ticked off at you—"

"—And it's only because I'm a beaner that they haven't bounced my ass out of there yet, huh?"

Gilliam shrugged. "It's still a white man's world, lots of ways. Besides, you've got other things goin' for you. You know how it is, too, when you're looking for a ballplayer that's gonna win ball games, you don't always automatically grab the biggest or the fastest—"

"—Or the blackest."

Gilliam looked sideways at him and laughed. "You got it. It's attitude that makes the difference. I figure that *you've* got a winning attitude. You'd *have* to have it, otherwise you'd give up."

Mendoza concentrated on the worn-out fast-food joints along the road. This was all he needed: a fading, millionaire jock full of locker room smarts and cosmic visions. He was beginning to wish he had stayed in Houston, fight or no fight.

"There's one thing that always bugged me about NASA and all these space people," Gilliam went on, "and that's because they always seemed to think that the only people who might ever want to get out there where the wind don't blow is white guys with white shirts and glasses. Captain Kirk, boring mothers like that."

"That isn't quite true."

"True *enough*, man. Most of them are all the same, the ones making the decisions, that is. They're all these

bookworm types who spent all their time playing with computers when they were kids, you remember? Well, hell, I don't want to run down somebody just 'cause they like machines ... that's just one kind of dedication, I suppose. But now and then you've got to get out in the sunshine ... chase a little pussy, put the pedal to the floor. You can't just sit there and look at the numbers and say, 'Shit, they don't add up.'"

"Some of the early guys were pretty rowdy."

"I've heard that — most of them didn't stick around too long, either. They found out that it wasn't any fun doing things the way NASA made you do them. No magic at all, goddamn reporters running after you all the time, all this boring junk on the TV. Why didn't they just leave everybody the hell alone, don't mention everything that's going on. Just come on the TV some day and say, 'In ten minutes we're going to fire some guy into space. Take a look.' *That* would have been exciting. Like those Mars pictures, with the pink sky?"

"I've seen them."

"*That* was interesting. It's like new turf. Everybody likes to see something new like that."

They were in the parking lot of the Hilton by now. Gilliam stopped the car. "So what would you say to fifty thousand?"

"Fifty thousand what?"

"Fifty thousand bucks, you start in

a week or whenever you can get loose, arrange the training and all that jazz, and do that launch. Half to start, half when it's over."

Fifty thousand dollars was more than NASA paid him in a whole year. It was more than the Air Force used to pay him in two.

"I'll think about it and call you on Monday, how's that?"

"Good enough."

"It is a lot of money," Jeannie said.

"It could also be a lot of trouble," Mendoza answered. They were just finishing dinner. Erik had already bolted out to the back yard. "I mean, Christ, I might be signing up to be some sort of interstellar smuggler or something. *God* doesn't know what goes up in those pods sometimes, and I hate getting messed up with anything the Russians are involved in." He picked up the dishes and carried them into the kitchen.

Jeannie followed. "I don't think that's worth worrying about, Jerry. They're just businessmen, after all. You were the one who told me that eventually all these private investors were going to start putting things into space. Now that someone's actually starting to do that, you think they're smugglers."

"I guess I just don't know if it would do *me* any good—"

"Honestly, Jerry — is NASA doing you any good right now? You've done

nothing but blabber on about this project since you came back. You *want* to do it, I can tell. At least it would get you back into space. Hugh Dickinson isn't going to send you up again, that's for sure."

"Well, that *isn't* for sure. I mean, Dickinson could fall over dead tomorrow, Stooker might get beat in his primary, you know. Besides, the agency has been awfully touchy about granting leave—"

"Jerry!" She put her hands on her ample hips and looked at him angrily. "Right now Alan Weisman and Peggy Holt are on leave to do *research*, and they won't be back for a *year*. You're only going to need *one* month — without pay! — and it could easily be justified as a fact-finding mission." She turned back to the sink. "If nothing else, do it for me. This is the first thing you've shown any interest in since that stupid meeting last *year*—"

He hated to be told what he already knew, but she was right: since his fall from grace, he had been sinking further and further into a terminal crouch, crawling far under a rock, just as NASA hoped he would. Of course he had gone through the right-stuff motions — it was expected that an astro jock would get up at 5 a.m. to show that he couldn't be beaten down — but he still came home wanting only to sleep or watch TV. And that was a good way to get fat, old, and useless.

He closed the cupboard door and eased up behind Jeannie, slipping his

hands around her waist, rocking against her. "I feel a certain interest returning," he murmured.

She took her soapy hands out of the water and turned toward him.

The phone rang.

"God damn it."

She smiled. "Go ahead."

He went to the desk and noticed that the calling number displayed on the auto-sec was familiar. "That's Dickinson."

"Good. He can be the first to know you're taking a leave."

He touched the receiver. "Hey," he said. "What was that you called this — a fact-finding mission?"

P III
lease give your status report," the "capcom" said.

"Guidance, go," Mendoza replied. "Life support, go ... Thrusters armed." He wanted to laugh. There was the sum total of the data he had to relay. Now he knew what it had been like for Yuri Gagarin or any of the early astronauts. Spam in a can.

"Go for burn in one minute. Please check your RCS auto."

"Right on." He adjusted the headset, which kept slipping down, and squirmed in his seat. It was a little too hot for comfort inside the Yuma simulators of Exxon's Space Delivery Division. For five hundred bucks an hour you'd think the air-conditioning would work. Mendoza hoped the sloppiness didn't extend to the pod's life-support

systems. "RCS to auto." He made a red mark on his homemade checklist. Exxon would have provided one, but he preferred his own.

"Twenty seconds to burn."

The "command console" of a Pirri-Weiss pod bore about as much resemblance to that of a Shuttle as the dashboard of a golf cart did to a Mercedes. There was just one display screen — no backup dials and gauges, either — a stick, a firing panel for the three tiny maneuvering thrusters, and a guidance system that was literally nothing more than a box bolted to the table top. The life support was good for twenty-four hours "if you breathed slow," and the sanitary facilities might as well have been dispensed with altogether.

"Five seconds."

He let the automatic guidance tweak him into the proper orientation for the burn. Plane changes were necessary because Exxon's launcher could only put pods into orbit for the Space Ops Center — this year, anyway. It took burns on two successive orbits to move a pod to Kosmograd's inclination. With its big glasters, of course, a Shuttle could make such a change with one small burn. But going by pod was going no-frills.

"Firing," Mendoza said. The numbers on the screen ran in their various appointed directions for thirty seconds — a long time for a burn — then stopped abruptly.

"This must be shutdown."

"That's correct, Captain."

"What's the new orbit look like?"

"One forty by one ninety, inclination—"

"Jesus! That's too damn elliptical."

He started to rub his forehead. This is what happened when you used third-hand rockets. If any of the little engines fired two seconds too long or too short, the pod could very well be dumped into an orbit it could never get out of. Mendoza certainly wouldn't have fuel to maneuver to safety, and just how likely were the Russians — or NASA — to send somebody after him?

"Let's go through this again. I'd like to do it right, just once."

Someone was knocking on the door. Dungee. "May I talk with you for a moment, Captain?"

Mendoza got up. "Yeah. I've been meaning to ask you a couple of things." He followed the lawyer into the corridor. "Besides, you're paying for it."

"How are things going, by the way?"

"Well, let's just say it's a good thing my insurance agent isn't here to see me. I've got no real backup systems, fail-safes that keep failing, no pressure suits on board...."

"You did get the initial fee."

"Yeah, that I got. But, tell me something, Mr. Dungee. With me and the engines and the extra fuel, I figure there's maybe room for less than a hundred kilograms of paying cargo. Call it two hundred pounds, if I skip lunch. Now, the only thing I can think of, off

hand, that's worth that kind of money, is heroin."

Dungee laughed and, by way of evading the question, opened the door into the launch center's tiny lobby. Through the glass, which looked in on the "control room," Mendoza could see half a dozen teams of operators clustered around their screens. And there was another set of observers inside the glass in the rear of the room. Something about them bothered Mendoza. "Are those people Russians?"

"Some of them," Dungee said. "You may even know that one — Colonel Vovkin?"

He sure did. Yuri Vovkin was the shortest of the four Russians (there were also a couple of Americans, blacks), a trim, sharp-featured man with a styled beard and designer casual clothes. "Yeah, I met Vovkin about three years ago, down in Houston. Smart man, but he's a shark. I wonder what he's doing here?"

"I believe he's touring the States with a trade delegation," Dungee smiled. "At least that's what he said when we were introduced a while ago."

One of the Americans was directing Vovkin's attention toward a station where a pair of unseen operators worked. The cosmonaut slipped his hands into his expensive pockets and stepped away from the group, which continued its slow procession around the room.

Apparently he wanted a better look — at what? The facilities at Baikonur were twice as good as these.

"Let's go inside," Dungee said.

"Let's finish our discussion first," Mendoza said. "It's not such a big deal. I only want to know what it is that I'm supposed to deliver to Kosmograd."

"That's what I propose to clear up," the lawyer said. "Inside."

Mendoza hesitated, then gave in, expecting Dungee to call the Russians over for one of their famous "spontaneous" meetings. But the Russians were halfway to the other exit. Vovkin did catch Mendoza's eye, giving a little wave.

"There," Dungee was saying.

The lawyer nodded toward the console that had seemed so fascinating to the Russians. Toward one of the operators, a black teenager with heavy braces on his legs, wearing a T-shirt that said Washington Americans on it.

"What the hell is this?" Mendoza demanded.

"Captain Mendoza, meet Buddy Gilliam—"

"We've met," the kid said, getting painfully to his feet.

"Reggie Gilliam's son," Dungee went on. "Your passenger."

"I didn't sign up to be a baby-sitter," Mendoza said.

Reggie Gilliam leaned against the wall beneath a No Smoking sign and lit a cigarette, "No one's asking you to be a baby-sitter. All you've got to do is drive the car — baby'll take care of his own ass. Hey, want some help with that?"

"No," Mendoza snapped, reaching around his back to zip up the two halves of the pressure suit. "And it isn't that simple. We'll forget the business of misrepresentation, for the moment. What you don't seem to understand is that this cockamamie flight is dangerous for me, and I know what to expect. It's ten times more dangerous for a healthy person who isn't trained. God knows what could happen to somebody who's ... ah...."

"Lordie, somebody who is crippled." Gilliam sounded like an Amenshouting Baptist.

"Yeah, somebody who is crippled. It could kill him." He wriggled inside the suit. Not a great fit, but it would do: they would only be underwater in the neutral buoyancy tank for two hours. This sort of work, here at NASA/Marshall, was something Mendoza always looked forward to. Floating free all afternoon. "I mean, this isn't Space Mountain. Look, I think it's great for a guy to want to buy his kid a ride in space. I've got a kid myself. But god-damnit, if you waited about three years you could probably get him a ride on the Shuttle, if that's all you want."

Gilliam sneered. "Now who's doing the misrepresentation? NASA's got a list a mile long of fat cats and VIPs they want to give rides to. A nigger kid who can't walk is going to be down about number four million." He put out his cigarette after two puffs and tossed it toward a wastebasket. It miss-

ed. "No, I'm gonna keep on with this thing my way. That's usually how you get it done, man. Now, you took the job, and you've got to make a choice: do it, or go back to sitting on NASA's bench."

Mendoza had his helmet over his head. He held it there.

"Look," Gilliam said. "I'm sorry about the snake dance, okay? But if I'd called you up one day and said, 'Hey, Astronaut Mendoza, could I borrow you for a month so's you can take my po' crippled kid for a ride in space?' you'd have called de po-lice. At least this way you had the chance to check out all the equipment with nothing else hanging over you. If it'll work for you, it'll work for the two of you."

He clicked the helmet down, leaving the faceplate open. "We'll see, then. Today he gets Space Cadet Lesson Number One — how to move in zero-G without puking all over yourself. And he's going to have to go through a lot more lessons before he gets into that pod."

"That's cool. I can stand it."

Mendoza plugged the suit into the testing kit. "I hope he can stand it."

Gilliam was taking swings with an imaginary baseball bat. "Buddy was telling me you two met down in Florida."

"Yeah. I thought he was a fan or something."

"Well, hell, he is. He's into lots of stuff — most of it I can't figure out, I tell you. He was running around with

all this STAR WARS and STAR TREK jazz when he was little, even before he got crippled."

"How'd that happen, anyway?" He was curious about it: how would a pro jock like Reggie Gilliam take to a crippled son? How would he?

"Accident." Gilliam took another swing. "Him and a friend whose daddy worked at Rockwell — this was when I was with the Angels — were screwing around with some model rocket one day, and the son of a bitch blew up on them. Buddy got some metal in his spine."

"What happened to the other kid?"

"Killed him dead."

The suit checked out. Mendoza phoned the technicians who were prepping Buddy and told them he'd be down in a minute. "That's really too bad."

"Maybe it's the Lord's way," Gilliam said quietly. "I don't know. I think he would have wanted to try to play ball, but that's a hell of a risky thing to be planning on — that I know for sure. And he was always better with these electronic things, anyway. After the accident he started paying more attention to school, too, which was good, because his momma and I were broke up by then and I was on the road a lot. Damn, but he's a sharp little bastard, the stuff he comes up with. He was the one turned me on to this space business, did you know that?"

Mendoza thought of Erik, another

sharp little bastard, always tampering with the household computer system — a system which still managed to confuse Mendoza from time to time. "They're all like that these days," he said.

"I suppose they've gotta be." Gilliam slammed on big fist into an equally big palm. "So what is this here? You going swimming on my time?"

"You could call it that. It's more like deep-sea diving, only you don't get wet."

Gilliam laughed. "Well, watch out for Shamu. I've got to get back to Atlanta. Too many white guys in white shirts running around here. You want anything else, just turn on that Mexican temper and let me know."

"One thing," he said.

"Shoot."

"No more goddamn surprises, okay?"

Gilliam made a little pistol with his hand and fired it at Mendoza. "You got it. See you in Yuma next week."

Halfway through the test with Buddy, Mendoza looked over at the tank's observation window, and there was Reggie Gilliam, big as life, with his face pressed up to the glass.

Mendoza knew that face. You could see it on any ten-year-old boy at any big league ballgame.

"Okay, this orbit would probably work, and we've got fuel left over," Mendoza said. They had been in the

simulator since nine, and it was almost one now. In two days rehearsals would be over, and it would be Real Life. None too soon for Mendoza.

"Let's get right to the fun part," he told the capcom. "Put us about a thousand meters short of Kosmograd, and let's do the rendezvous one more time. For luck."

"Okay," the operator said. "Give me a minute to re-cycle."

"Take it." He stood up and glanced at Buddy, in the next seat. "I'm going to get some air. Do you want to go out?"

"I'll be okay right here."

"Okay." There wasn't a hell of a lot for the kid to do. In fact, Mendoza had considered doing the simulator work without him altogether, but Air Force and NASA habits were too strong. And it was best for the kid to know what was going on. It might save time later on.

The two of them didn't talk much, alone. TV reporters had cornered them several times, during which interviews Buddy tended to sound like a press agent's dream — a real junior cadet of the Rocket Patrol — with stories of his accident, his interest in microprocessors, his work at Yuma during summer vacation, his father. Mendoza, on the other hand, tried to smile and be as boring as possible, expounding endlessly on the advantages of cheap surface-to-orbit transport systems that did not require massive taxpayer subsidies, the endless frontier, space colonies.

The TV people learned to leave him out of things. The viewers, however, must have thought he and Buddy were old pals ... the skilled if somewhat disgraced astronaut trying to win back his wings, and the plucky kid. But the only private conversation they had had remained the baseball chat in Florida that first day. It wasn't dislike; Mendoza thought the teenager was bright, polite, and probably pushed into this whole project by his hotdog father, who was currently struggling at bat for the Americans, now five games out of first. Circumstances also kept them apart. Mendoza flew back to Houston for weekends, and Buddy spent most of his free time in physical therapy and survival training. Even when they were both at Yuma, Mendoza did a lot of worrying about fuel, delta-vee, re-entry angles, and his Russian.

"Ready," the operator said. "One thousand and closing at one-fifty."

"Roger," Mendoza said. He tweaked the thrusters twice, more to get the feel of them than anything else, which cut the closing velocity to one-twenty. The guidance computer fired the tiny RCS thrusters to compensate for any wobbles in the main engines. The docking would be tricky. A pod was a lot like an egg — strong in its own way, but if you rapped the edge just right....

"Five hundred, closing at ninety."

"Rog." With his eyes on the radar display, he punched in a good four-second burn that brought them to a dead stop relative to the ghost space station

one hundred meters away. From this point it would be like putting a car in a garage.

Except that the goddamn display was flashing red. "I've got a program alert," Mendoza said. "The board's dumping all the data—"

"Hold on," the operator said. "Ah ... hell."

"Christ."

"Check the DOS terminal switches," Buddy said.

Mendoza couldn't help looking. Sure enough, two of the switches were set to AUTO, which meant that every time Mendoza manually fired the thrusters, the guidance computer went a little nuts.

"What about that, capcom?" Mendoza said.

"Checks out."

He flipped the switches into the right position. The board cleared. Mendoza looked at his checklist and saw DOS MODE TO MANUAL checked in red. So how had the switches gotten in the wrong mode?

He shut off the intercom. "Buddy, look, I know this is only a simulation and you can't get hurt, but don't ever screw around with these switches—"

"I didn't."

"Well, somebody did. Just remember that I'm the pilot — you're cargo, even if you do have your own pocket computer."

Buddy looped the carry strap of his processor around his neck. "Whatever you say, Commodore."

Mendoza stared at the kid long enough for his temper to flare up and cool down. Well, who knew what had happened? People made mistakes in simulators all the time, since you were always aware that it wasn't real. People made fatal mistakes in orbit, leaving switches in the wrong position, anything. Buddy wasn't dumb enough to try to help ... but Mendoza suspected that the kid played astronaut when he was out of the cabin. *He* would have. "I think we ought to take a break for lunch."

"Fine." Buddy reached down and locked his braces into their walking position, grabbed his cane, and stood up. As he squeezed past Mendoza, however, he moved a little too fast, and his stiff right leg caught on the chair—

"Damn!"

He started to topple in slow motion. Mendoza twisted around and stuck out an arm, which didn't do much good. They hit the floor together, Mendoza on the bottom.

After a moment Mendoza said, "Are you all right?"

"Yeah." Buddy struggled upright and even gave Mendoza a hand. "Sorry," he said grimly.

"Hey, Buddy, tell me something. Are you sure you want to go through with this? I tell you, I'm not that crazy about this Mickey Mouse set-up—"

"No way, man," he said. "It's gonna work, and we're gonna go. Both of us." He turned to leave the simulator.

"Hey, Buddy," Mendoza said. He handed him the processor. "Here."

He watched him go, clumping loudly through the door, wondering, what have I gotten into?

Your new boss seems a little more ... understanding ... of human needs ... than NASA..." Jeannie said, whispering between nibbles at his chest. They lay together in the cool morning darkness of Mendoza's hotel room. "And they even paid for my ticket."

"Yeah, and Howard Johnson's has bigger beds than the Cape." He laughed and rolled onto his side, cradling her. "But some things, they do not change. I really have to start getting ready."

"How long?"

He looked at his new Piaget watch. "They start firing the unmanned pods in three hours. I go about forty minutes later. End of the bus again."

As if to urge him out of bed, the clock radio came to life with an old country and western song. "'Mama, don't let your babies grow up to be spacemen,'" Jeannie said, laughing. "Well, at least this morning you're finally getting a chance to make history."

"What history? Seven or eight people have ridden pods before me. One of them even docked at Kosmograd. This is no big deal."

"No," she said firmly, "this is history. The first ... totally frivolous space flight."

His turn to laugh. "That's a great thing to be famous for." He went into the bathroom and turned on the shower. "I guess I'll have to take it, though, won't I?"

"Hugh Dickinson will take it."

"What's that supposed to mean?"

"He called just before I left Houston. He wanted to know when you were launching."

"Did you tell him," he said from the bathroom, "that they've got this new thing nowadays called television, you can have one right in your own house, it's got all the latest news—"

"Jerry. He was just looking for an excuse to wish you good luck."

"And probably to let me know he'd be watching if I screwed up."

"He told me to ask you to come see him as soon as you get back. Something about a tour aboard the Space Operations Center—"

Well, by God ... "Aw, you're making that up. You just want me out of town for six months. I bet you've got a boyfriend—"

She threw a towel at him. "I've got a *vato* for a husband. He wants to go to Mars."

"Doesn't everybody?"

"Not me," she said, slipping into his arms for a last kiss. "At least, not till I get you some breakfast."

He closed the shower door and let the water run completely over his head, drumming on his skull and filling his ears. Poor man's sensory-deprivation tank. He tended to do it on morn-

ings when it was still dark, when he felt unusually close to El Muerto. He was all too aware of what could happen to him before the sun set ... decapitation in a crash ... suffocation because of a guidance error ... immolation ... decompression, explosive or otherwise ... drowning, even.

Jesu, Mendoza, enough of that. Think of the Endless Frontier ... monster cylinder-cities turning in an eternal march ... the mountains of the moon ... the plains below Olympica, where surely the angels waited. Do this right today, and all of this shall I give you.

And take it, I will, *gracias*.

"Home Run, this is Yuma. We show you go for your burn. Good luck."

"Roger, Yuma," Mendoza said. "In ... two minutes."

Below, beyond the tiny port, the barren land of Grandfather Raul slipped by ... Sonora. It had taken two hundred years, but eventually the dirt and the heat had driven the Mendozas across the border to Tucson, and Raul to a lifetime of bussing tables and fixing cars. Now, just three hours past, on this day, Raul's seed had risen from that same brown earth high into the sky at the tip of a finger of light. Imagine! Grandpa had died before Jerry ever got into NASA, but he would have liked the idea: he was always on the lookout for a "new deal." Get there first, Gerardo! And shoot the first An-

glo who come along!

"What's so funny?" Buddy said.

"Was I laughing?"

"Yeah. You aren't going space-happy on me, are you?"

"Hell, not an old rocket jockey like me. No way." He pushed himself back to the seat and belted down. He looked at the screen. "One minute."

Now he could think of nothing but the approach to Kosmograd ... a dolphin trying to mate with a whale. "If God had meant Man to perform rendezvous and docking in free-fall," he said, "He would have given us processors in our heads."

"Did you ever hit a baseball?" Buddy asked.

Mendoza laughed. "Maybe that's my problem. Your old man should be flying this thing. Twenty seconds."

He looked at the switches and his checklist for the tenth time.

"Five ... four ... three ... two ... initiate—"

Burn!

And then thoughts of Buddy, grandpa, and whales went away.

There was, of all things, a cool cloth on his forehead, and it felt good, but the mere thought of moving or opening his eyes brought on an Olympica-sized headache.

"Hold still, man," Buddy ordered.

"I can't tell if I'm moving or not."

"You're moving all right — about eight clicks a second, okay? Just don't turn your head. You've got a bump the

size of a baseball on it."

For some reason he thought that was pretty goddamn funny.

"The burn?" What had happened? It had to be over by *now*—

"It went okay," Buddy said. "Shut down right on time. Give me your arm."

He did. "What's okay mean? How long have I been out?"

"Fifteen minutes or so."

"God damn—" A spray touched his arm. Presently his head felt better, and, slowly, he opened his eyes. The display showed them close enough to projection to be safe. "Wow."

"The strap busted when the engines kicked in," Buddy said, floating freely in the tiny cabin. "Cheap mother. I heard a thump, and you were out cold."

Radar showed them just two thousand meters from Kosmograd, and closing nicely. He rolled the pod with the RCS — and there was the big beacon itself, right out there in the port. "How did we get from the burn to station-keep?" he asked.

The kid pushed himself back toward his own couch. "I, uh, fired the engines the second time."

"Oh." His head started to hurt again. He closed his eyes and began to rub them. "Good job."

"You aren't mad?"

"I'm mad at the goddamn strap. Other than that — you've got to do what you've got to do." He looked at Buddy, noticing that the kid's T-shirt

was torn in the front. That's where he'd gotten the "cloth." "Good improvisation there." He thumbed the mike to hail Kosmograd and tried to recall the last time in his life he had been knocked unconscious. He couldn't remember a time.

"Kosmograd, Home Run. *Zstrasvi-tye*. Hi."

"Welcome to Space City, Home Run," a Scots-accented voice replied. "Are ye ready for approach figures?"

"*Da*, Space City." Docking would take twenty minutes, getting out of the pod another fifteen. Allow a couple of hours for the Russians to service the pod and load the return cargo, time for Jerry and Buddy to sightsee. Another three hours for re-entry and return.

With luck, he would be back on Earth for late dinner — certainly drinks. "Let's see if the Mexican kid can park this 'rider.'"

"Okay, Commodore," Buddy said.

Just call me Walt — Walt Disney, Mendoza thought.

"What do you mean, you're not going back?"

Mendoza's head started to hurt again. In front of him Buddy floated back and forth between the narrow walls of the Kosmograd People's Infirmary, not daring to look him in the eyes. A Russian doctor hovered nearby. "That's what I said. I'm not going back."

"Could you excuse us for a moment?" Mendoza asked the doctor. He

felt stupid about it, but he needed a diversion.

"Of course," the woman replied, smiling. "We understand completely the need for Party discipline."

"Spaseebah. Thank you." When she was gone he turned to Buddy again. "You can't just decide to *stay* here, kid. This isn't the goddamn Moscow Hilton or something—"

"I know that, man. I'm immigrating."

"Oh, really?" He couldn't help being sarcastic. "Permanent, or are you just looking for a green card?"

"I'm staying for good."

"Grow up, Buddy. This is like ... the pioneers up here. They don't have room for hardship cases."

"I've got some skills!" he said. "I know processors."

Yuri Vovkin appeared in the hatchway. "Captain Mendoza, Comrade Gilliam, very nice to be seeing both of you again. There is a problem?"

"Colonel," Buddy said.

"Buddy, wait a minute!"

"I want to apply for political asylum here, under the UN Charter."

"Asylum *granted!*" Vovkin crowed. We are always happy to assist those feeling the tyranny of capitalist system."

Mendoza suddenly felt very tired. Trade delegation. No more goddamn surprises ... huh. "You bastards had this all worked out."

"A good socialist is always prepared," Vovkin said.

Mendoza grabbed Buddy's shoulder. "What about your father?"

The kid spun away. "He'll dig it. He knows better than anyone, that down there I'll never be anything but a cripple." With very little clumsiness Buddy tucked himself into a full somersault right in front of Mendoza's face. Then the kid started to laugh. "Up here, man, I've got the chance to be a superstar."

After a month it was finally possible for Mendoza to step outside without facing at least one reporter. Tonight he sat in a first-base seat at the Dome, watching the Americans beat the hell out of the Astros. Reggie Gilliam doubled twice and played well, though he seemed slow on the bases. It didn't make much difference to the huge crowd, which cheered madly any time Gilliam and the ball got within ten feet of each other.

Were they cheering a ballplayer? Or were they just here to get a look at the man who sent his son into space?

"Hey, Gerardo!"

He had waited for the crowd to thin out before trying to battle up the aisles. Gilliam was hollering at him from the playing field. "Go down to the clubhouse door!"

Should he? Aside from the day right after the mission they had not talked. "Okay." He waved.

"Give me ten minutes!"

It was fifteen minutes, but the door

eventually opened. "Let's go up to the lounge for a while," Gilliam said. Mendoza followed him to an elevator, which shot to the top floor of the Dome. "I talked to Buddy yesterday," the big man said.

"How's he doing?"

"He's learning Russian, by God. I can't understand him when he starts up with it."

"That's good. He'll need it."

"I hear you're going up again." They found seats in the lounge, which was deserted except for the bartender, who was closing down.

"In a couple of months, on the Shuttle this time." He paused as Gilliam strolled to the bar, grabbed a bottle from behind it, and returned. "Space Ops Center, Systems Engineer, that's me."

"Then what?"

"I don't know. I'm staying in touch with Exxon—"

Gilliam poured two glasses of clear liquid. "Let's drink to that, then."

"What is this, white lightning?"

"No, but that might be a good name for it. It's vodka."

Mendoza tasted it. "What kind?"

Gilliam held up the bottle and swiveled in his chair so that he faced the night sky. "I was thinking of calling it Old Space Ranger, or something like that, once it gets out in the open." He looked back and winked. "Right now,

you understand, this is *very* expensive hooch."

"You son of a bitch," Mendoza said. "I thought that shipment was photovoltaics or something like that. Wonder drugs."

"Some folks consider this stuff a wonder drug, Gerardo. No, this is genuine, space-distilled booze, selling right now at fifteen thousand bucks a bottle, mostly to collectors, of course, and we have to pay a hell of a licensing fee to Vovkin's Iranian account. But you did bring back thirty bottles, and, you know, a little thinning doesn't seem to hurt it...."

"I'll bet you didn't even lose money on this thing."

"Oh, some, on paper. But it was worth it, and it'll get cheaper from now on." The big man got up and went to the window, pointing up to the sky with his drink. "Can you see that goddamn thing from here?"

"Later tonight, I think," Mendoza said. "It should rise in the southeast ... if you stay up to watch."

Gilliam set the drink down and made some little mock swings with his imaginary bat. "Those people up there, Gerardo, they gonna play sports, do you think?"

"Sure. Someday."

"Damn! I wonder what kind?" He grinned. "You think they might want a good outfielder?"



F&SF Competition

REPORT ON COMPETITION 27

RUNNERS UP

We asked competitors to send in bumper stickers for your craft of the future in the March issue. The response was good, but the contest was harder to judge than usual because of repeats, e.g.: HAVE YOU HUGGED YOUR CLONE (DROID, etc.) TODAY: IF BLASTERS (NEEDLERS, POCKET NUKES, etc.) ARE OUTLAWED, ONLY OUTLAWS WILL HAVE . . . and so on. The winners include some repeats, but they were chosen on the overall quality of their entries.

FIRST PRIZE

EROS — THE HONEYMOON
ASTEROID
SCUBA, L.A., CALIFORNIA'S
SUNKEN WONDERLAND
CAUTION — SLOWER THAN
LIGHT VEHICLE
VOTE YES ON DRAGON
CONTROL

—Kenneth Ringlein
Lincoln, NE

SECOND PRIZE

KEEP ON SHUTTLIN' NASA
HONK IF YOU HAVE TIME
ENOUGH FOR LOVE
OLD TREKKIES NEVER DIE, THEY
JUST BEAM WAY UP
CHEWBACCA FOR WOOKIE OF
THE YEAR

—R. M. Beem
Lincoln, NE

WE VISITED THE GRAND
LANDFILL
REPROGRAM THE PRESIDENT
IF YOU CAN READ THIS, YOU
NOW QUALIFY FOR A PhD
IN ENGLISH
DOPPLER IF YOU LOVE JESUS

—Jeff Grimshaw
New York, NY

I SURVIVED FIRST CONTACT
FLASH YOUR COHERENTS IF
YOU'VE BEEN TO THE SUN
SAVE THE RABBIT — WILDLIFE
DEFENSE GROUP

—Ron Daniel
Cincinnati, OH

IF YOU CAN READ THIS,
YOU'RE STERILE
CAUTION: NUCLEAR FAMILY
I'D RATHER BE FISSION

—Ralph Tucker
Brooklyn, NY

WELCOME TO NEW YORK —
DON'T EAT THE WATER
SUPPORT THE E.R.A.
THE FORCE IS LOOKING FOR
A FEW GOOD MEN

—Susan Milmore
New York, NY

186,000 MILES PER SECOND: IT'S
NOT JUST A GOOD IDEA —
IT'S THE LAW
STARSHIP CAPTAINS DO IT
WITH ENTERPRISE
MAUD'DIB SAVES

—Laurence Brothers
New York, NY

COMPETITION 28 (suggested by Alan D. Legatt)

Write a science fiction recipe. This can include foods mentioned in science fiction stories, alien flora, fauna, or minerals, or even the names of science fiction stories and characters. For example:

Double-Decker Seldonberry Pie

(Dedicated to Dr. A)

- 2 cups seldonberries, washed
- 1 cup currants (of space)
- 1 cup Venusian jelly seeds, preferably soft ones
- ½ cup Martian Jabra water
- 1 cup sugar
- ½ teaspoon Mountain Tang (garlic may be substituted)
- 2 tablespoons resublimated thiotimeline
- 2 tablespoons cornstarch
- 1 teaspoon cinnamon
- pie crust dough, double portion

Put the jelly seeds and Jabra water in a large saucepan, bring to a boil, and stir until the jelly seeds melt (if they're soft ones, they'll melt more easily). Reduce the flame, add the sugar and Mountain Tang, and then simmer, stirring constantly, until the sugar and thiotimeline dissolve. Turn off the flame, and add the seldonberries, currants, thiotimeline, and cornstarch. Mix well.

Divide the pie crust dough into two equal portions, and roll each out into a 10 inch circle. Press one of these into the bottom and sides of a 9 inch pie pan to form the foundation for the pie. Pour in half of the filling, and then place the other dough circle over this to form the second foundation. Pour in the rest of the filling, sprinkle with the cinnamon, and bake in an atomic oven at 450°K for one hour.

Variations: One enterprising cook suggested substituting roddenberries for the seldonberries. Omit the cinnamon; instead, sprinkle the top of the pie with 1/2 teaspoon of dilithium crystals before baking.

**(Reprinted from "In Good Taste," a cookbook supplement to the Encyclopedia Galactica, by permission of the Encyclopedia Galactica Publishing Co., Terminus.)*

Rules: Send entries to Competition Editor, F&SF, Box 56, Cornwall, Conn. 06753. Entries must be received by August 15. Judges are the editors of F&SF; their decision is final. All entries become the property of F&SF; none can be returned.

Prizes: First prize, eight different hard cover science fiction books. Second prize, 20 different sf paperbacks, Runners-up will receive one-year subscriptions to F&SF. Results of Competition 28 will appear in the December Issue.

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